Paradises Lost

Ursula K. Le Guin

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This shaking keeps me steady. I should know.
What falls away is always. And is near.
I wake to sleep, and take my waking slow.
I learn by going where I have to go.

Theodore Roethke: The Waking

The Dirtball

The blue parts were lots of water, like the hydro tanks only deeper, and the other-colored parts were dirt, like the earth gardens only bigger. Sky was what she couldn't understand. Sky was another ball that fit around the dirtball, Father said, but they couldn't show it in the model globe, because you couldn't see it. It was transparent, like air. It was air. But blue. A ball of air, and it looked blue from underneath, and it was outside the dirtball. Air outside. That was really strange. Was there air inside the dirtball? No, Father said, just earth. You lived on the outside of the dirtball, like evamen doing eva, only you didn't have to wear a suit. You could breathe the blue air, just like you were inside. In nighttime you'd see black and stars, like if you were doing eva, Father said, but in daytime you'd see only blue. She asked why. Because the light was brighter than the stars, he said. Blue light? No; the star that made it was yellow, but there was so much air it looked blue. She gave up. It was all so hard and so long ago. And it didn't matter.

Of course they would "land" on some other dirtball, but that wasn't going to happen till she was very old, nearly dead, sixty-five years old. By then, if it mattered, she'd understand.

Privative Definition

Alive in the world are human beings, plants, and bacteria.

The bacteria live in and on the human beings and the plants and the soils and other things, and are alive but not visible. The activity even of great numbers of bacteria is not often visible, or appears to be simply a property of their host. Their life is on another order. Orders, as a rule, cannot perceive one another except with instruments which allow perception of a different scale. With such an instrument one gazes in wonder at the world revealed. But the instrument has not revealed one's larger-order world to that smaller-order world, which continues orderly, undisturbed and unaware, until the drop dries suddenly on the glass slide. Reciprocity is a rare thing.

The smaller-order world revealed here is an austere one. No amoeba oozing along, or graceful paisley-paramecium, or vacuum-cleaning rotifer; no creature larger than bacteria, juddering endlessly under the impacts of molecules.

And only certain bacteria. No molds, no wild yeasts. No virus (down another order). Nothing that causes disease in human beings or in plants. Nothing but the necessary bacteria, the house-cleaners, the digesters, the makers of dirt—clean dirt. There is no gangrene in the world, no blood poisoning. No colds in the head, no flu, no measles, no plague, no typhus or typhoid or tuberculosis or AIDS or dengue or cholera or yellow fever or Ebola or syphilis or poliomyelitis or leprosy or bilharzia or herpes, no chickenpox, no cold sores, no shingles. No Lyme disease. No ticks. No malaria. No mosquitoes. No fleas or flies, no roaches or spiders, no weevils or worms. Nothing in the world has more or less than two legs. Nothing has wings. Nothing sucks blood. Nothing hides in tiny crevices, waves tendrils, scuttles into shadows, lays eggs, washes its fur, clicks its mandibles, or turns around three times before it lies down with its nose on its tail. Nothing has a tail. Nothing in the world has tentacles or fins or paws or claws. Nothing in the world soars. Nothing swims. Nothing purrs, barks, growls, roars, chitters, trills, or cries repeatedly two notes, a descending fourth, for three months of the year. There are no months of the year. There is no moon. There is no year. There is no sun. Time is divided into lightcycles, darkcycles, and tendays. Every 365.25 cycles there is a celebration and a number called The Year is changed. This Year is 141. It says so on the schoolroom clock.

The Tiger

Of course there are pictures of moons and suns and animals, all labelled with names. In the Library on the bookscreens you can watch big things running on all fours over some kind of hairy carpet and the

voices say, “horses in wyoming,” or “llamas in peru.” Some of the pictures are funny. Some of them you wish you could touch. Some are frightening. There’s one with bright hair all gold and dark, with terrible clear eyes that stare at you without liking you, without knowing you at all. “Tiger in zoo,” the voice says. Then children are playing with some little “kittens” that climb on them and the children giggle and the kittens are cute, like dolls or babies, until one of them looks right at you and there are the same eyes, the round, clear eyes that do not know your name.

“I am Hsing,” Hsing said loudly to the kitten-picture on the bookscreen. The picture turned its head away, and Hsing burst into tears.

Teacher was there, full of comfort and queries. “I hate it, I hate it!” the five-year-old wailed.

“It’s only a movie. It can’t hurt you. It isn’t real,” said the twenty-five-year-old.

Only people are real. Only people are alive. Father’s plants are alive, he says so, but people are really alive. People know you. They know your name. They like you. Or if they don’t, like Alida’s cousin’s little boy from School Four, you tell them who you are and then they know you.

“I’m Hsing.”

“Shing,” the little boy said, and she tried to teach him the difference between saying Hsing and saying Shing, but the difference didn’t matter unless you were talking Chinese, and it didn’t matter anyway, because they were going to play Follow-the-Leader with Rosie and Lena and all the others. And Luis, of course.

If Nothing Is Very Different from You, What Is a Little Different from You Is Very Different From You

Luis was very different from Hsing. For one thing, she had a vulva and he had a penis. As they were comparing the two one day, Luis remarked that he liked the word vulva because it sounded warm and soft and round. And vagina sounded rather grand. But “Penis, peee-niss,” he said mincingly, “pee-piss! It sounds like a little dinky pissy sissy thing. It ought to have a better name.” They made up names for it. Bobwob, said Hsing. Gowbondo! said Luis. Bobwob when it was lying down and Gowbondo when it stood up, they decided, aching with laughter. “Up, up, Gowbondo!” Luis cried, and it raised its head a little from his slender, silky thigh. “See, it knows its name! You call it.” And she called it, and it answered, although Luis had to help it a little, and they laughed until not only Bobwob-Gowbondo but both of

them were limp all over, rolling on the floor, there in Luis's room where they always went after school unless they went to Hsing's room.

Putting on Clothes

She looked forward to it forever and couldn't sleep at all the night before, lying awake forever. But there was Father standing there suddenly, wearing his dress-up clothes, black long pants and his white silky kurta. "Wake up, sleepyhead, are you going to sleep through your Ceremony?" She leaped up from bed in terror, believing him, so that he said at once, seriously, "No, no, I was only joking. You have plenty of time. You don't have to get dressed, yet!" She saw the joke, but she was too bewildered and excited to laugh. "Help me comb my *hair!*" she wailed, tugging her comb into a knot in the thick black tangles. He knelt to help her.

By the time they got to the Temenos her excitement only made everything clearer than usual, bright, distinct. The huge room seemed even bigger than usual. Music was playing, cheery and dancy. Lots and lots of people were coming, naked children, each one with a parent in dress-up clothes, some of them with two parents, many with grandparents, a few with a little naked brother or sister or a big brother or sister in dress-up clothes. Luis's father was there, but he was only wearing workshorts and an old singlet, and she was sorry for Luis. Her mother Jael came through the big crowd of people. Jael's son Joel came with her from Quad Four, and both of them were wearing really, really dress-up clothes. Jael's had red zigzags and sparkles painted on, and Joel's shirt was purple with a gold zipper. They hugged and kissed, and Jael gave Father a package and said "For later," and Hsing knew what was in it, but didn't say anything. Father was hiding his package in one hand behind his back and she knew what was in it too.

The music was turning into the song they had all been learning, all the seven-year-olds in all four schools in the whole world: "I'm growing up! I'm growing up!" The parents pushed the children forward or led the shy ones by the hand, whispering, "Sing! Sing!" And all the little naked children, singing, came together in the center of the high round room. "I'm growing up! What a happy happy day!" they sang, and the grown-ups began to sing with them, so it got huge and loud and deep and made tears start in her eyes. "What a happy happy day!"

An old teacher talked a little while, and then a young teacher with a beautiful high clear voice said, "Now everyone sit down," and

everyone sat down on the deck. “I will read each child’s name. When I read your name, stand up. Your parent and relations will stand up too, and then you can go to them, and look at your clothes. But don’t put them on till everybody in the world has their new clothes! I’ll say when. So! Are you ready? So! 5-Adano Sita! Stand up and be clothed!”

A little tiny girl jumped up in the circle of sitting children. She was red in the face and looked around in terror for her mother, who stood up laughing and waving a beautiful red shirt. Little Sita ran headlong for her, and everybody laughed and clapped. “5-Alzs-Matteu Frans! Stand up and be clothed!” And so it went, till the clear voice said, “5-Liu Hsing! Stand up and be clothed!” and she stood up, her eyes fixed on Father, who was easy to see because of Jael and Joel glittering beside him. She ran to him and took something silky, something wonderful, into her arms, and the people from Peony Compound and Lotus Compound clapped specially hard. She turned and stood pressed against Father’s legs, watching.

“5-Nova Luis! Stand up and be clothed,” but he was up and over with his father almost before the words were said, so that people laughed again, and hardly had time to clap. Hsing tried to catch Luis’s eye but he wouldn’t look. He watched the rest of the Ceremony seriously, so she did too.

“These are the fifty-four seven-year-old children of the Fifth Generation,” the teacher said when no more children were left in the center of the circle. “Let us welcome them to all the joys and responsibilities of growing up,” and everybody cheered and clapped while the naked children, hurrying and inept, struggling with unfamiliar holes, getting things upside down, fumbling with buttons, put on their new clothes, their first clothes, and stood up again, resplendent.

Then all the teachers and grown-ups started singing “What a happy happy day” again and there was a lot more hugging and kissing. Hsing got enough of that pretty soon, but she noticed that Luis really liked it, and hugged back hard when grown-ups he hardly knew hugged him.

Ed had given Luis black shorts and a blue silky shirt, in which he looked absolutely different and absolutely himself. Rosa had all white clothes because her mother was an angel. Father had given Hsing dark blue shorts and a white shirt, and Jael’s package was light blue pants and a blue shirt with white stars on it, to wear tomorrow. The cloth of the shorts rubbed her thighs when she moved and the shirt felt soft, soft on her shoulders and belly. She danced with joy, and Father took her hands and danced gravely with her. “So, my grown-up daughter!” he said, and his smile crowned the day.

Luis Being Different

The penis-vulva difference was superficial. She had learned that word from Father not long ago, and found it useful. Luis wasn't different only from her or only because of that superficial difference. He was different from everybody. Nobody said "ought to" the way Luis did. He wanted the truth. Not to lie. He wanted honor. That was the word. That was the difference. He had more honor than the others. Honor is hard and clear and Luis was hard and clear. And at the same time and in exactly the same way he was tender, he was soft. He got asthma and couldn't breathe, he got big headaches that knocked him out for days, he was sick before exams and performances and ceremonies. He was like the knife that wounds, and like the wound. Everybody treated Luis with a difference, respectfully, liking him but not trying to get close to him. Only she knew that he was also the touch that heals the wound.

V

When they were ten and finally were allowed to enter what the teachers called Virtual Earth and the Chi-Ans called V-Dichew, Hsing was overwhelmed and disappointed. V-Dichew was exciting and tremendously complicated, yet thin. It was superficial. It was programs.

There were infinite things in it, but one stupid real thing, her old toothbrush, had more being in it than all the swarming rush of objects and sensations in City or Jungle or Countryside. In Countryside, she was always aware that although there was nothing overhead but the blue air, and she was walking along on grass-stuff that carpeted the uneven deck for impossible distances rising up into impossible shapes (*hills*), and that the noises in her ears were air moving fast (*wind*) and a kind of high yit-yit sound sometimes (*birds*), and that those things on all fours way off on the winds, no, on the hills, were animals (*cattle*), all the same, all the time, she knew she was sitting in a chair in School Two V-Lab with some junk attached to her body, and her body refused to be fooled, insisting that no matter how strange and amazing and educational and important and historical V-Dichew was, it was a fake. Dreams could also be convincing, beautiful, frightening, important. But she didn't want to live in dreams. She wanted to be awake in her body touching true cloth, true metal, true skin.

The Poet

When she was fourteen, Hsing wrote a poem for an English assignment. She wrote it in both the languages she knew. In English it went:

> In the Fifth Generation
> My grandfather's grandfather walked under heaven.
> That was another world.
> When I am a grandmother, they say, I may walk under heaven
> On another world.
> But I am living my life now joyously in my world
> Here in the middle of heaven.

She had been learning Chinese with her father since she was nine; they had read some of the classics together. He smiled when he read the Chinese poem, read the characters "under heaven"—"t'ien hsia." She saw his smile and it made her happy, proud of her erudition and enormously proud that Yao had recognised it, that they shared this almost secret, almost private understanding.

The teacher asked her to read her poem aloud in both languages at first-quarter Class Day for second-year high-schoolers. The next day the editor of *Q-4*, the most famous literary magazine in the world, called her up and asked if he could publish it. Her teacher had sent it to him. He wanted her to read it for the audio. "It needs your voice," he said. He was a big man with a beard, 4-Bass Abby, imperious and opinionated, a god. He was rude to everybody else but kind to her. When they made the recording and she fluffed it, he just said, "Back up and take it easy, poet," and she did.

Then it seemed for a while that everywhere she was she heard her own voice saying "When I am a grandmother, they say…" on the speaker, and people she hardly knew at school said, "Hey I heard your poem, it was zazz." All the angels liked it specially and told her so.

She was going to be a poet, of course. She would be really great, like 2-Eli Ali. Only instead of little short weird obscure poems like Eli's, she would write a great narrative poem about—actually the problem was what should it be about. It could be a great historical epic about the Zero Generation. It would be called *Genesis*. For a week she was excited, thinking about it all the time. But to do it she'd really have to learn all the history that she was sort of gliding through in History, she'd have to read hundreds of books. And she'd have to really go into V-Dichew to feel what it had been like to live there. It would all take years before she could even start writing it.

Maybe she could write love poems. There were an awful lot of

love poems in the World Lit anthology. She had a feeling that you didn't need to really be in love with a person to write a love poem. Maybe in fact if you were really seriously in love it would interfere with the poetry. A sort of yearning, undemanding adoration like she felt for Bass Abby, or for Rosa at school, maybe was a good place to start from. So she wrote quite a few love poems, but for one reason or another she was embarrassed about turning them in to her teacher, and only showed them to Luis. Luis had acted all along like he didn't think she was a poet. She had to show him.

"I like this one," he said. She peered to see which one.

> What is the sadness in you
> that I see only in your smile?
> I wish I could hold your sadness
> in my arms like a sleeping child.

She hadn't thought much of the poem, it was so short, but now it seemed better than she'd thought.

"It's about Yao, isn't it?" Luis said.

"About my *father?*" Hsing said, so shocked she felt her cheeks burning. "No! It's a *love* poem!"

"Well, who do you actually love a lot besides your father?" Luis asked in his horrible matter-of-fact way.

"A whole lot of people! And love is—There are different *kinds*—"

"Are there?" He glanced up at her. He pondered. "I didn't say it was a sex poem. I don't think it is a sex poem."

"Oh, you are so weird," Hsing said, abruptly and deftly snatching her writer back and closing the folder labelled *Original Poems by 5-Liu Hsing*. "What makes you think you know anything about poetry anyhow?"

"I know about as much about it as you do," said Luis with his pedantic fairness, "but I can't *do* it at all. You can. Sometimes."

"Nobody can write great poetry all the time!"

"Well,"—her heart always sank when he said "Well"—"maybe not literally all the time, but the good ones have an amazingly high average. Shakespeare, and Li Po, and Yeats, and 2-Eli—"

"What's the use trying to be like *them?*" she wailed.

"I didn't mean you had to be like them," he said after a slight pause and in a different tone. He had realised that he might have hurt her. That made him unhappy. When he was unhappy he became gentle. She knew exactly how he felt, and why, and what he'd do, and she also knew the fierce, regretful tenderness for him that swelled up inside her, a sore tenderness, like a bruise. She said, "Oh, I don't care about all that anyway. Words are too sloppy, I like math. Let's go

meet Lena at the gym."

As they jogged through the corridors it occurred to her that in fact the poem he had liked wasn't about Rosa, as she had thought, or about her father, as he had thought, but was about him, Luis. But it was all stupid anyhow and didn't matter. So she wasn't Shakespeare. But she loved quadratic equations.

4-Liu Yao

How sheltered they were, how protected! Safer than any guarded prince or pampered child of the rich had ever been; safer than any child had ever been on Earth.

No cold winds to shiver in or heavy heat to sweat in. No plagues or coughs or fevers or toothaches. No hunger. No wars. No weapons. No danger. No danger from anything in the world but the danger the world itself was in. But that was a constant, a condition of being, and therefore hard to think about, except sometimes in dream; the horrible images. The walls of the world deformed, bulging, shattering. The soundless explosion. A spray of bloody mist, a tiny smear of vapor in the starlight. They were all in danger all the time, surrounded by danger. That is the essence of safety, the heart of it: that the danger is outside.

They lived inside. Inside their world with its strong walls and strong laws, shaped and bulwarked to protect and surround them with strength. There they lived, and there was no threat unless they made it.

"People are a risky business," Liu Yao said, smiling. "Plants mostly don't go crazy."

Yao's profession was gardening. He worked in hydroponic engineering and maintenance and in plant-genetic quality and control. He was in the gardens every workday and many evenings. The 4-5-Liu homespace was full of pet plants—gourdvines in carboys of water, flowering shrubs in pots of dirt, epiphytes festooning the vents and light-fixtures. Many of them were experimentals, which usually died. Hsing believed that her father was sorry for these genetic errors, felt guilty about them, and brought them home to die in peace. Occasionally one of the experiments thrived under his patient attendance and went back to the plant labs in triumph, accompanied by Yao's faint, deprecating smile.

4-Liu Yao was a short, slender, handsome man with a shock of black hair early going grey. He did not have the bearing of a handsome man. He was reserved, courteous, but shy. A good listener but a rare and low-voiced talker, when he was with more than one or

two people he was almost entirely silent. With his mother 3-Liu Meiling or his friend 4-Wang Yuen or his daughter Hsing he would converse contentedly, unassertively. His passions were contained, restrained, powerful: the Chinese classics, his plants, his daughter. He thought a good deal and felt a good deal. He was mostly content to follow his thoughts and feelings alone, in silence, like a man going downstream in a small boat on a great river, sometimes steering, more often drifting. Of boats and rivers, of cliffs and currents, Yao knew only images in pictures, words in poems. Sometimes he dreamed that he was in a boat on a river, but the dreams were vague. He knew dirt, though, knew it exactly, bodily. Dirt was what he worked in. And water and air he knew, the humble, transparent things, on whose clarity, invisibility, life depended, the miracles. A bubble of air and water floated in the dry black vacuum, reflecting starlight. He lived inside it.

3-Liu Meiling lived in the group of homespaces called Peony Compound, a corridor away from her son's homespace. She led an extremely active social life limited almost entirely to the Chinese-Ancestry population of Quadrant Two. Her profession was chemistry; she worked in the fabric labs; she had never liked the work. As soon as she decently could she went on halftime and then retired. Didn't like any work, she said. Liked to look after babies in the babygarden, play games, gamble for flower-cookies, talk, laugh, gossip, find out what was happening next door. She took great pleasure in her son and granddaughter and ran in and out of their homespace constantly, bringing dumplings, rice cakes, gossip. "You should move to Peony!" she said frequently, but knew they wouldn't, because Yao was unsociable, and that was fine, except she did hope that Hsing would stay with her own people when she decided to have a baby, which she also said frequently. "Hsing's mother is a fine woman, I like Jael," she told her son, "but I never will understand why you couldn't have had a baby from one of the Wong girls and then her mama would be right here in Quadrant Two, that would have been so nice for all of us. But I know you have to do things your way. And I must say even if Hsing is only half Chinese Ancestry nobody would ever know it, and what a beauty she's getting to be, so I suppose you did know what you were doing, if anyone ever does when it comes to falling in love or having a child, which I doubt. It's basically luck, is all it is. Young 5-Li has an eye on her, did you notice yesterday? He's twenty-three, a good solid boy. Here she is now! Hsing! How beautiful your hair is when it's long! You should let it grow longer!" The kind, practical, undemanding babble of his mother's talk was another stream on which Yao floated vaguely, peacefully, until all at once, in one moment, it was cut short. Silence. A bubble had burst. A bubble in an

artery of the brain, the doctors said. For a few hours 3-Liu Meiling gazed in mute bewilderment at something no one else could see, and then died. She was only seventy. All life is in danger, from without, from within. People are a risky business.

The Floating World

The brief funeral was held in Peony Compound; then the body of 3-Liu Meiling was taken by her son and granddaughter and the technician to the Life Center to be recycled, a chemical process of breakdown and re-use with which as a chemist she had been perfectly familiar. She would still be part of their world, not as a being but as an endless becoming. She would be part of the children Hsing would bear. They were all part of one another. All used and users, all eaters, all eaten.

Inside a bubble where there is so much air and no more, so much water and no more, so much food and no more, so much energy and no more—in an aquarium, perfectly self-contained in its tiny balancing act: one catfish, two sticklebacks, three waterweeds, plenty of algae, three snails, maybe four, but no dragonfly larvae—inside a bubble, the population must be strictly controlled.

When Meiling dies she is replaced. But she is no more than replaced. Everybody can have a child. Some can't or won't or don't have children and some children die young, and so most of those who want two children can have two children. Four thousand isn't a great number. It is a carefully maintained number. Four thousand isn't a great gene pool, but it is a carefully selected and managed one. The anthrogeneticists are just as watchful and dispassionate as Yao in the plant labs. But they do not experiment. Sometimes they can catch a fault at the source, but they have not the resources to meddle with twists and recombinations. All such massive, elaborate technologies, supported by the continuous exploitation of the resources of a planet, were left behind by the Zero Generation. The anthrogeneticists have good tools and know their job, and their job is maintenance. They maintain the quality, literally, of life.

Everyone who wants to can have a child. One child, two at most. A woman has her motherchild. A man has his fatherchild.

The arrangement is unfair to men, who have to persuade a woman to bear a child for them. The arrangement is unfair to women, who are expected to spend three-quarters of a year of their life bearing somebody else's child. To women who want a child and cannot conceive or whose sexual life is with other women, so that they have to persuade both a man and a woman to get and give them a child,

the arrangement is doubly unfair. The arrangement is, in fact, unfair. Sexuality and justice have little if anything in common. Love and friendship and conscience and kindness and obstinacy find ways to make the unfair arrangement work, though not without anxiety, not without anguish, and not always.

Marriage and linking are informal options, often chosen while the children are young, for many women find it hard to part with a fatherchild, and a homespace for four is luxuriously spacious.

Many women do not want to bear or bring up a child at all, many feel their fertility to be a privilege and obligation, and some pride themselves on it. Now and then there is a woman who boasts of the number of her fatherchildren, as of a basketball score.

4-Steinfeld Jael bore Hsing; she's Hsing's mother, but Hsing isn't her child. Hsing is 4-Liu Yao's child, his fatherdaughter. Jael's child is Joel, her motherson, six years older than his halfsister Hsing, two years younger than his halfbrother 4-Adami Seth.

Everybody has a homespace. A single is one and one half rooms; a room is a space of 960 cubic feet. The commonest shape is 10' x 12' x 8', but since the partitions are movable the proportions can be altered freely within the limits of the structural space. A double, like the 4-5 Lius', is usually arranged as two little sleepcells and a large sharespace: two privacies and a commonality. When people link, and if they each have one or two children, their homespace may get quite large. The 3-4-5-Steinman-Adamis, Jael and Joel and 3-Adami Manhattan, to whom she has been linked for years, and his fatherson Seth, have 3,840 cubic feet of homespace. They live in Quad Four, where a lot of Nor-Ans live, Northamerican and European Ancestry people. With her usual flair for the dramatic, Jael has found an area in the outer arc where there's room for ten-foot ceilings. "Like the sky!" she cries. She has painted the ceilings bright blue. "Feel the difference?" she says. "The sense of liberation—of freedom?" In fact, when she goes to stay with Jael on visits, Hsing finds the rooms rather disagreeable; they seem deep and cold, with all that waste space overhead. But Jael fills them with her warmth, her golden, inexhaustible voice, her bright clothing, her abundance of being.

When Hsing began menstruating and learning how to use prevention and brooding about sex, both Jael and Meiling told her that having a baby is a piece of luck. They were very different women, but they used the same word. "The best luck," Meiling said. "So interesting! Nothing else uses *all* of you." And Jael talked about how your relation to the baby in your womb and the newborn baby nursing was part of sex, an extension and completion of it that you were really lucky to know. Hsing listened with the modest, cynical reserve of the virgin. She'd make up her own mind about all that

when the time came.

Many Chi-Ans had, more or less silently, disapproved of Yao's asking a woman of another quadrant and a different ancestry to bear his child. Many people of Jael's ancestry had asked her if she wanted an exotic experience or what. The fact was Jael and Yao had fallen desperately in love. They were old enough to realise that love was all they had in common. Jael had asked Yao if she could have his child. Moved to the heart, he had agreed. Hsing was born of an undying passion. Whenever Yao came to bring Hsing for a visit, Jael flung her arms about him crying "Oh Yao, it's you!" with such utter, ravished joy and delight that only a man as thoroughly satisfied and self-satisfied as Adami Manhattan could have escaped agonies of jealousy. Manhattan was a huge, hairy man. Perhaps being fifteen years older, eight inches taller, and a great deal hairier than Yao helped him to be unjealous of him.

Grandparents provided another way to increase the size of a homespace. Sometimes relatives, halfsibs, their parents, their children grouped together in still larger spaces. Next down the corridor from the 4-5 Lius' was the 3-4-5-Wangs'—Lotus Compound—eleven contiguous homespaces, the partitions arranged so as to provide a central atrium, the scene of ceaseless noise and activity. Peony Compound, where Meiling had lived all her life, always had from eight to eighteen homespaces. None of the other ancestries lived in such large groupings.

In fact by the fifth generation many people had lost any sense of what ancestry was, found it irrelevant, and disapproved of people who based their identity or their community on it. In Council, disapproval was frequently expressed of Chinese-Ancestry clannishness, referred to by its critics as "Quad Two separatism" or more darkly as "racism," and by those who practiced it as "keeping to our ways." The Chi-Ans protested the new Schools Administration policy of shifting teachers around from quad to quad, so that children would be taught by people from other ancestries, other communities; but they were outvoted in Council.

The Bubble

Dangers, risks. In the glass bubble, the fragile world, the danger of schism, of conspiracy, the danger of aberrant behavior, madness, the violence of madness. No decision of any consequence at all was to be made by a single person acting without counsel. Nobody ever, since the beginning, had been allowed alone at any of the systems controls. Always a backup, a watcher. Yet there had been incidents. None had

yet wreaked permanent damage.

But what of the merely normal, usual behavior of human beings? What is aberrant? Who's sane?

Read the histories, say the teachers. History tells us who we are, how we have behaved, therefore how we will behave.

Does it? The history in the bookscreens, Earth History, that appalling record of injustice, cruelty, enslavement, hatred, murder—that record, justified and glorified by every government and institution, of waste and misuse of human life, animal life, plant life, the air, the water, the planet? If that is who we are, what hope for us? History must be what we have escaped from. It is what we were, not what we are. History is what we need never do again.

The foam of the salt ocean has tossed up a bubble. It floats free.

To learn who we are, look not at history but at the arts, the record of our best, our genius. The elderly, sorrowful, Dutch faces gaze out of the darkness of a lost century. The mother's beautiful grave head is bowed above the dead son who lies across her lap. The old mad king cries over his murdered daughter, "Never, never, never, never, never!" With infinite gentleness the Compassionate One murmurs, "It does not last, it cannot satisfy, it has no being." "Sleep, sleep," say the cradle songs, and "Set me free" cry the yearning slave-songs. The symphonies rise, a glory out of darkness. And the poets, the crazy poets cry out, "A terrible beauty is born." But they're all crazy. They're all old and mad. All their beauty is terrible. Don't read the poets. They don't last, they can't satisfy, they have no being. They wrote about another world, the dirt world. That too, too solid world which the Zeroes made naught of.

Ti Chiu, Dichew, the dirt-ball. Earth. The "garbage" world. The "trash" planet.

These words are archaic, history-words, attached only to history-images: receptacles were filled with "dirty" "garbage" that was poured into vehicles which carried it to "trash dumps" to "throw away." What does that mean? Where is "away"?

Roxana and Rosa

When she was sixteen Hsing read the Diaries of 0-Fayez Roxana. That self-probing mind, forever questioning its own honesty, was attractive to the adolescent. Roxana was rather like Luis, Hsing thought, but a woman. Sometimes she needed to be with a woman's mind, not a man's, but Lena was obsessed with her basketball scores, and Rosa had gone totally angel, and Grandmother had died. Hsing read Roxana's Diaries.

She realised for the first time that the people of the Zero Generation, the worldmakers, had believed that they were imposing an immense sacrifice on their descendants. What the Zeroes gave up, what they lost in leaving Earth—Roxana always used the English word—was compensated to them by their mission, their hope, and (as Roxana was well aware) by the tremendous power they had wielded in creating the very fabric of life for thousands of people for generations to come. "We are the gods of *Discovery*," Roxana wrote. "May the true gods forgive us our arrogance!"

But when she speculated on the years to come, she did not write of her descendants as children of the gods, but as victims, seeing them with fear, guilt, and pity, helpless prisoners of their ancestor's will and desire. "How will *they* forgive us?" she mourned. "We who took the world from them before they were ever born—we who took the seas, the mountains, the meadowlands, the cities, the sunlight from them, all their birthright? We have left them trapped in a cage, a tin can, a specimen box, to live and die like laboratory rats and never see the moon, never run across a field, never know what freedom is!"

I don't know what cages or tin cans or specimen boxes are, Hsing thought with impatience, but whatever a laboratory rat is, I'm not. I've run across a v-field in Countryside. You don't need fields and hills and all that stuff to be free! Freedom's what your mind does, what your soul is. It has nothing to do with all that Dichew-stuff. Don't worry, Grandmother! she said to the long-dead writer. It all worked out just fine. You made a wonderful world. You were a very wise, kind god.

When Roxana got depressed about her poor deprived descendants she also tended to go on and on about Shindychew, which she called the destination planet or just the Destination. Sometimes it cheered her up to imagine what it might be like, but mostly she worried about it. Would it be habitable? Would there be life on it? What kind of life? What would "the settlers" find, how would they cope with what they found, would they send the information back to Earth? That was so important to her. It was funny, poor Roxana worrying about what kind of signals her great-great-great-grandchildren would send "back" in two hundred years to a place they'd never been! But the bizarre idea was a great consolation to her. It was her justification for what they had done. It was the reason. *Discovery* would build a vast and delicate rainbow bridge across Space, and across it the true gods would walk: information, knowledge. The rational gods. That was Roxana's recurring image, her solace.

Hsing found her god-imagery tiresome. People with a monotheist ancestry seemed unable to get over it. Roxana's lower-case metaphorical deities were preferable to the capitalised Gods and

Fathers in History and Lit, but she had very little patience with any of them.

Getting the Message

Disappointed with Roxana, Hsing quarreled with her friend.

"Rosie, I wish you'd talk about other stuff," she said.

"I just want to share my happiness with you," Rosa said in her Bliss voice, soft, mild, and as flexible as a steel mainbeam.

"We used to be happy together without dragging in Bliss."

Rosa looked at her with a general lovingness that insulted Hsing obscurely but very deeply. We were *friends*, Rosie! she wanted to cry.

"Why do you think we're here, Hsing?"

Mistrusting the question, she pondered a bit before she answered. "If you mean that literally, we're here because the Zero Generation arranged that we should be here. If you mean it in some abstract sense, then I reject the question as loaded. To ask 'why' assumes purpose, a final cause. Zero Generation had a purpose: to send a ship to another planet. We're carrying it out."

"But where are we going?" Rosa asked with the intense sweetness, the sweet intensity, that made Hsing feel tight, sour, and defensive.

"To the Destination. Shindychew. And you and I will be old grannies when we get there!"

"Why are we going there?"

"To get information and send it back," Hsing said, having no answer ready except Roxana's, and then hesitated. She realised that it was a fair question, and that she had never really asked or answered it. "And to live there," she said. "To find out—about the universe. We are a—we are a voyage. Of discovery. The voyage of the *Discovery*."

She discovered the meaning of the name of the world as she said it.

"To discover—?"

"Rosie, this leading-question bit belongs in babygarden. 'And what do we call *this* nice curly letter?' Come on. Talk to me, don't manipulate me!"

"Don't be afraid, angel," Rosa said, smiling at Hsing's anger. "Don't be afraid of joy."

"Don't call me angel. I liked you when you were just you, Rosa."

"I never had any idea who I was before I knew Bliss," Rosa said, no longer smiling, and with such simplicity that Hsing felt both awed and ashamed.

But when she left Rosa, she was bereft. She had lost her friend for

years, her beloved for a while. They wouldn't link when they grew up, as she had dreamed. She was damned if she'd be an angel! But oh, Rosie, Rosie. She tried to write a poem. Only two lines came:

> We will always meet and never meet again.
> Our corridors lead us forever apart.

What Does Apart Mean in a Closed World?

It was Hsing's first real loss. Grandmother Meiling had been such a cheerful, kindly presence, her death had been so unexpected, so quietly abrupt, that Hsing had never been entirely aware that she was gone. It seemed as if she still lived down the corridor. To think of her was not to grieve, but to be comforted. But Rosa was lost.

Hsing brought all the vigor and passion of her youth to her first grief. She walked in shadow. Certain parts of her mind might have been darkened permanently. Her fierce resentment of the angels for taking Rosa from her led her to think that some of the older people of her ancestry were right: it was no use trying to understand other-ancestry people. They were different. They were best avoided. Keep to our own kind. Keep to the middle, keep to the way.

Even Yao, tired of fellow-workers in the plantlabs preaching Bliss, quoted Old Long-Ears—"They talk, they don't know. They know, they don't talk."

Fools

"So you know?" Luis said, when she repeated the line to him. "You Chi-Ans?"

"No. Nobody knows. I just don't like preaching!"

"Lots of people do, though," Luis said. "They like preaching and they like being preached to. All kinds of people."

Not us, she thought, but didn't say. After all, Luis wasn't Chinese Ancestry.

"Just because you have a flat face," he said, "you don't have to make a wall out of it."

"I don't have a flat face. That's racist."

"Yes you do. The Great Wall of China. Come on out, Hsing. It's me. Hybrid Luis."

"You aren't any more hybrid than I am."

"Much more."

"You don't think Jael is Chinese!" she jeered.

"No, she's pure Nor-An. But my birthmother's half Euro and half Indo and my father's one quarter each Southamerican and Afro and the other half Japanese, if I have it straight. Whatever it all means. What it means is I have no ancestry. Only ancestors. But you! You look like Yao and your grandmother, and you talk like them, and you learned Chinese from them, and you grew up here in the heart of an ancestry, and you're in process right now of doing the old Chi-An Exclusion Act. Your ancestry comes from the most racist people in history."

"Not so! The Japanese—the Euros—the Northamericans—"

They argued amicably for a while on sketchy data, and agreed that probably everybody on Dichew had been racist, as well as sexist, classist, and obsessed with money, that incomprehensible but omnipresent element of all the histories. They got sidetracked into economics, which they had been trying to understand in history class. They talked about money for a while, very stupidly.

If everybody has access to the same food, clothing, furniture, tools, education, information, work, and authority, and hoarding is useless because you can have for the asking, and gambling is an idle sport because there's nothing to lose, so that wealth and poverty have become mere metaphors—"rich in love," "poor in spirit"—how is one to understand the importance of money?

"Really they were awful fools," Hsing said, voicing the heresy all intelligent young people arrived at sooner or later.

"Then we are too," Luis said, maybe believing it, maybe not.

"Oh Luis," Hsing said with a long, deep sigh, looking up at the mural on the wall of the High School snackery, currently an abstract of soft curving pinks and golds, "I don't know what I'd do without you."

"Be an awful fool."

She nodded.

4-Nova Ed

Luis wasn't turning out the way his father intended. They both knew it. 4-Nova Ed was a kind man whose existence was centered in his genitals. Stimulation and relief was the pressing issue, but procreation was important to him too. He had wanted a son to carry his name and his genes into the future. He was glad to help make a child for any woman who asked him to, and did so three times; but he had looked long and carefully for the right woman to bear his fatherson. He studied every word of several compatibility charts and

genetic mixmatches, though reading wasn't his favorite occupation; and when he finally decided he'd found the one, he made sure she was willing to control the gender. "A daughter would be fine if I had two, but if it's one it's a son, right?"

"A son you want, a son you get," said 4-Sandstrom Lakshmi, and bore him one. An active, athletic woman, she found the experience of pregnancy so uncomfortable and time-consuming that she never repeated it. "It was your big, brown, Goddam eyes, Ed," she said. "Never again. Here you are. He's all yours." Every now and then Lakshmi turned up at the 4-5 Nova homespace, always bringing a toy appropriate to Luis's age a year ago or five years from now. Usually she and Ed had what she called commemorative sex. After it she would say, "I wonder what the hell I thought I was doing. Never again! But I guess he's OK, isn't he?"

"The kid's OK!" his father said, heartily and without conviction. "Your brains, my plumbing."

She worked in Central Communications; Ed was a physical therapist, a good one, but as he said, his ideas were all in his hands. "It's why I'm such a good lover," he told his partners, and he was right. He was also a good parent for a baby. He knew how to hold the baby and handle him, and loved to do so. He lacked the fear of the infant, the squeamish dissociation which paralyses less manly men. The delicacy and vigor of the tiny body delighted him. He loved Luis as flesh of his flesh, wholeheartedly and happily, for the first couple of years, and less happily for the rest of his life. As the years went on the pure delight got covered over and buried under a lot of other stuff, a lot of hard feelings.

The child had a deep, silent will and temper. He would never give in and never take things easy. He had colic forever. Every tooth was a battle. He wheezed. He learned to talk before he could walk. By the time he was three he was saying things that left Ed staring. "Don't talk so Goddam fancy!" he told the child. He was disappointed in his son and ashamed of his disappointment. He had wanted a companion, a double, a kid to teach racquetball to. Ed had been Quad Two racquetball champion six years running.

Luis dutifully learned to play racquetball, never very well, and tried to teach his father a word game called Grammary, which drove Ed nuts. He did outstandingly well at school, and Ed tried to be proud of him. Instead of running around with the kidherd, Luis always brought a Chi-An kid over, a girl, Liu Hsing, and they shut the room door and played for hours, silently. Ed checked, of course. They weren't up to anything more than all herdkids got up to, but he was glad when they got to their Ceremony and started wearing clothes. In shorts and shirts they looked like little adults. In their nakedness they

had been somehow slippery, elusive, mysterious.

As all the growing-up rules came into force, Luis obeyed them. He still preferred the girl Hsing over all the boys and they still saw each other all the time, but never alone together with the door shut. Which meant that when Ed was home he had to listen to them as they did their homework or talked. Talked, talked, shit, how they talked. Until the girl was twelve. Then her ancestry's rule was that she could only meet a boy in public places and with other people around. Ed found this an excellent idea. He hoped Luis would take up with other girls, maybe get into some boy activities. Luis and Hsing did go around with a group of the Quad Two teens. But the two of them always ended up somewhere, talking.

"When I was sixteen, I'd slept with three girls," Ed said. "And a couple of guys." It didn't come out the way he meant. He meant to confide in Luis, to encourage him, but it sounded like a boast or a reproach.

"I don't want to have sex yet," the boy said, sounding stuffy. Ed couldn't blame him.

"It's not really a big deal," Ed said.

"It is for you," Luis said. "So I guess it is for me."

"No, what I mean—" But Ed could not say what he meant. "It's not just fun," he said lamely.

A pause.

"Beats jerking off," Ed said.

Luis nodded, evidently in full agreement.

A pause.

"I just want to figure out how to, maybe, you know, how to find my own way, in all that," the boy said, not as fast with the words as usual.

"That's OK," the father said, and they parted with mutual relief. The boy might be slow, Ed thought, but at least he'd grown up in a homespace with plenty of healthy, open, happy sex as an example.

On Nature

It was interesting to know that Ed had slept with men; it must have been youthful experiment, for he'd never to Luis's knowledge brought a man home. But he brought women home. Probably every woman of his own generation, Luis thought, and now he was bringing home some of the older Fives. Luis knew the sound of his orgasms by heart—a harsh, increasing hah! hah! HAH!—and had heard every conceivable form of ecstatic female shriek, wail, howl, grunt, gasp, and bellow. The most notable bellower was 4-Yep Sosi, a physical

therapist from Quad Three. She had been coming over every now and then ever since Luis could remember. She always brought star-cookies for Luis, even now. Sosi started out going aah, like a lot of them, but her aahs got louder and louder and more and more continuous, rising to a relentless, mindless ululation, so piercing that once Granny 2-Wong down the corridor thought it was an alarm siren and roused up everybody in the Wong compound. It didn't embarrass Ed at all. Nothing did. "It's perfectly natural," he said.

It was a favorite phrase of his. Anything to do with the body was "perfectly natural." Anything to do with the mind wasn't.

So, what was "nature"?

As far as Luis could think it through, and he thought about it a good deal his last year in high school, Ed was quite correct. In this world—on this ship, he corrected himself, for he was trying to train his mind in certain habits—on this ship, "nature" was the human body. And to some extent the plants, soils, and water in hydroponics; and the bacterial population. Those only to some extent, because they were so closely controlled by the techs, even more closely controlled than human bodies were.

"Nature," on the original planet, had meant what was not controlled by human beings. "Nature" was what was substantially previous to control, the raw material for control, or what had escaped from control. Thus the areas of Dichew where few people lived, quadrants that were undesirably dry or cold or steep, had been called "nature," "wilderness," or "nature preserves." In these areas lived the animals, which were also called "natural" or "wild." And all the "animal" functions of the human body were therefore "natural"—eating, drinking, pissing, shitting, sex, reflex, sleep, shouting, and going off like a siren when somebody licked your clitoris.

Control over these functions wasn't called unnatural, however, except possibly by Ed. It was called civilisation. Control started affecting the natural body as soon as it was born. And it really began to click in, Luis saw, at seven when you put on clothes and undertook to be a citizen instead of one of the kidherd, the wild bunch, the naked little savages.

Wonderful words!—wild—savage—civilisation—citizen—

No matter how you civilised it, the body remained somewhat wild, or savage, or natural. It had to keep up its animal functions, or die. It could never be fully tamed, fully controlled. Even plants, Luis learned from listening to Hsing's father, however manipulated to serve their symbiotic functions, were not totally predictable or obedient; and the bacteria populations came up constantly with "wild" breeds, possibly dangerous mutations. The only things that could be perfectly controlled were inanimate, the matter of the world, the elements and

compounds, solid, liquid, or gas, and the artifacts made from them.

What about the controller, the civiliser itself, the mind? Was it civilised? Did it control itself?

There seemed to be no reason why it should not; yet its failures to do so constituted most of what was taught as History. But that was inevitable, Luis thought, because on Dichew "Nature" had been so huge and so strong. Nothing there was really, absolutely under control, except v-stuff.

Oddly enough he had learned that interesting fact from a virtual. He hacked his way through a tropical jungle buzzing with things that flew, bit, crawled, stung, snapped, and tormented the flesh, gasping for breath in a malodorous clinging heat that took his strength away, until he came to an open place where a horrible little group of humans deformed by disease, malnutrition, and self-mutilation rushed out of huts, screaming at the sight of him, and shot poisoned darts at him through blowguns. It was part of a lesson in Ethical Dilemmas, using the V-Dichew program Jungle. The words tropic, jungle, trees, insects, sting, huts, tattoos, darts had been in the Preliminary Vocabulary yesterday. But right now the Ethical Dilemma was pressing. Should he run away? try to parley? ask for mercy? shoot back? His v-persona carried a lethal weapon and wore a heavy garment, which might deflect the darts or might not.

It was an interesting lesson, and they had a good debate in class afterwards. But what stuck with Luis long after was the sheer, overwhelming enormity of that "jungle," that "wild nature" in which the savage human beings seemed so insignificant as to be accidental, and the civilised human being was completely foreign. He did not belong there. No sane person did. No wonder the subzero generations had had trouble maintaining civilisation and self-control, against odds like that.

A Controlled Experiment

Although he found the arguments of the angels both rather silly and rather disturbing, he thought that they might be right in one fundamental matter: that the destination of this ship was not as important as the voyage itself. Having read history, and experienced Jungle and Inner City, Luis wondered if part of the Zero Generation's intent might have been to give at least a few thousand people a place where they could escape such horrors. A place where human existence could be controlled, as in a laboratory experiment. A controlled experiment in control.

Or a controlled experiment in freedom?

That was the biggest word Luis knew.

He mentally perceived words as having various sizes, densities, depths; words were dark stars, some small and dull and solid, some immense, complex, subtle, with a powerful gravity-field that attracted infinite meanings to them. *Freedom* was the biggest of the dark stars.

For what it meant to him personally he had a clear, precise image. His asthma attacks were infrequent, but vivid to his mind; and once when he was thirteen, in gymnastics, he had been under Big Ling at the wrong moment and Big Ling had come down right on him. Being about twice Luis's weight, Ling had squashed the air entirely out of Luis's lungs. After an endless time of gasping for air, the first breath, raw, dragging, searingly painful: that was freedom. Breath. What you breathed.

Without it you suffocated, went dark, and died.

People who had to live on the animal level might have been able to move around a lot, but never had enough air for their minds to breathe; they had no freedom. That was clear to him in the history readings and the historical v-worlds. Inner City 2000 was so shocking because it wasn't "wild nature" that made the people there crazy, sick, dangerous, and incredibly ugly, but their own lack of control over their own supposedly civilised "nature."

Human nature. A strange combination of words.

Luis thought about the man in Quad Three, last year, who had attacked a woman sexually, beaten her unconscious, and then killed himself by drinking liquid oxygen. He had been a Five, and the event, disturbing to everyone in the world, was particularly horrible and haunting to the people of his generation. They asked themselves *could I have done that? could that happen to me?* None of them seemed to know the answer. That man, 5-Wolfson Ad, had lost control over his "animal" or "natural" needs and so had ended up without any freedom at all, not making choices, not able even to stay alive. Maybe some people couldn't handle freedom.

The angels never talked about freedom. Follow orders, attain Bliss.

What would the angels do in the Year 201?

That was an interesting question, actually. What would any of them do, what would happen to the controlled experiment, when the laboratory ship reached the Destination? Shindychew was a planet—another huge mass of wild stuff, uncontrollable "nature," where they wouldn't even know what the rules were. On Dichew, at least their ancestors had been familiar with "nature," knew how to use it, how to get around in it, which animals were dangerous or poisonous, how to grow the wild plants, and so on. On the New Earth they wouldn't know anything.

The books talked about that, a little, not much. After all there was still half a century to go before they got there. But it would be interesting to find out what they did know about Shindychew.

When he asked his history teacher, 3-Tranh Eti, she said that the education program would provide Generation Six with a whole lot of education about the Destination and living there. Generation Five people would mostly be so old when they got there that it wasn't really their problem, she said, though of course they would be allowed to "land" if they wished to. The program was designed to keep the "middle generations" ("That's us," the old woman said drily) content with their world. A practical approach, she said, and well meant, but perhaps it had encouraged the mentality that was now so very prevalent among the proponents of Bliss.

She spoke frankly to Luis, her best student, and he told her as frankly that whether he got there or not, no matter how old he'd be if he got there, he wanted to find out now where he was going. He understood why; he didn't need to understand how; but he did want to understand where.

Tranh Eti gave him some help in accessing information, but it turned out that the education program for Generation Six was not accessible at present. It was being reviewed by the Educational Committee.

His other teachers advised him to finish his studies in high school and college and worry about the Destination later. If at all.

He went to the Head Librarian, old 3-Tan, his friend Bingdi's grandfather.

"To speculate about our destination," Tan said, "is to increase anxiety, impatience, and erroneous expectations." He smiled slightly. He spoke slowly, with pauses between sentences. "Our job is to travel. A different job from arrival." After a pause he went on, "But a generation that knows only how to travel—can they teach a generation how to arrive?"

The Garan

Luis continued to pursue his interest. He went back, on his own, to Jungle.

He had to follow the trail, of course. However through-composed a virtual-reality program was, you could do in it only what there was to do. It was like a dream, any dream, especially a nightmare: only certain choices are offered, if any.

There was the trail. You had to take the trail. The trail would lead to the ugly, degraded little savages, and they would scream and shoot

poisoned darts, and then he would have to make one of the choices. Methodically, Luis made them, one after another.

Attempts to reason with the savages or run away from them ended quickly in blackout, which was, of course, v-death.

Once when they attacked him he fired the gun and killed one of the men. This was horrible beyond anything he had ever imagined and he escaped the program within moments of firing the weapon. That night he dreamed that he had a secret name that nobody knew, not even himself. A woman he had never seen before came to him and said, “Add your name to the wolf.”

He went back into Jungle, though it was not easy. He found that if he showed no fear, threatened them with the gun if they attacked but did not fire it, the little men eventually, very suddenly, accepted his presence. After that another set of choice-forks opened out. He could keep his weapon in evidence and force the savages to lead him to the Lost City (which was supposed to be why you’d entered the jungle). He could make them obey him, but always he blacked out before he got far; the savages had murdered him. Or, if he behaved without fear, not threatening them and asking nothing of them, he could stay with them, living in a half-ruined hut. They accepted him as some kind of crazy man. The women gave him food and showed him how to do things, and he began to learn their language and customs. These were surprisingly intricate, formal, and fascinating. It was only v-learning; it only went so far, and seemed more than it was; when you came out you didn’t come out with much. A program could hold only so much, even in implication. But what little he recalled of it had strangely enriched his thinking. He intended to go back some time, work his way to that final choice, and redo living with the savages.

But he had a different purpose, this time. This time when he entered Jungle, he moved as slowly as he could, and once he was well in he stopped and stood still on the path. He was no longer afraid of meeting the savages. Now that he knew them, had lived among them, it would have been sad to see them come at him, as they inevitably would, screaming and trying to kill him. He wanted not to meet them, this time. They were virtual human beings made by human beings. He had come to try to experience a place where nothing was human.

As he stood there, beginning to sweat at once, smelling the stinks, slapping at the creatures that buzzed and flickered around him and landed on his skin and bit, listening to the uncanny noises, he thought about Hsing. She would not admit VR as experience. She never went to V-Dichew unless it was required by a teacher. She never played v-games, wouldn’t even try the really interesting one Luis and Bingdi had worked out using “Borges’s Garden” as a matrix. “I don’t want to

be in another person's world, I want to be in mine," she said.

"You read novels," he said.

"Sure. But *I* do reading. The writer puts the story there, and I do it. I make it be. The v-programmer uses me to do *his* story. Nobody uses my body and my mind but me. OK?" She always got fierce.

She had a point; but what struck Luis, standing alert and tense on the narrow incredibly intricate jungle pathway like a corridor gone crazy, watching something full of legs crawl away into the sinister darkness under a huge thing that he decided was a tree, but a tree lying down instead of standing up—what struck him was not only the choking, senseless complexity of this place, its quality of chaos, even though it was only a re-creation, the program of a sensation-field—but also how hostile it was. Dangerous, frightening. Was he experiencing the programmer's hostility?

There were plenty of sadistic programs; some people got hooked on them. How could he tell whether "nature" was in fact so terrible?

Certainly there were VR programs in which Dichew appeared simpler, more comprehensible—Countryside or Walking to the Mountains. And watching films, where the only sensations you had to cope with were sight and hearing, you could see that even though it was chaotic, "nature" could be pretty. Some people got hooked on those films, too, and were always watching sea turtles swimming in the sea and sky birds flying in the sky. But looking was one thing and feeling was another, even if it was only virtual feeling.

How could anybody actually live their whole life in a place like Jungle? The discomfort of the sensation-field was constant, the heat, the creatures, the changes of temperature, the rough, gritty, filthy surfaces of things, the endless unevenness—every step you took you had to look to see what your foot was going to land on. He remembered the natives' disgusting food. They killed animals and ate pieces of animal. The women chewed the root of some kind of plant, spat the chewed mass into a dish, let it rot a while, and then everybody ate it. If these stinging and biting poisonous animals were real not virtual, you'd come out of Jungle full of toxins. Indeed, what finally happened to you in the choice-fork where you lived with the savages was that you put your hand on a vine and it was a poisonous animal with no legs. It bit your hand, and within a few minutes you felt terrible pain and nausea, and then blackout. They had to end the program one way or another, of course; it was ten cycles subjective, ten actual hours, the maximum permitted length of a v-program. He had been not only virtually dead, but actually extremely stiff, hungry, thirsty, exhausted, and distressed when he came out of it.

Was the program honest? Did people on Dichew actually live in such misery? Not for ten cycles/hours, but for a lifetime? In constant

fear of dangerous animals, fear of enemy savages, fear of each other, in constant pain from the thorns on plants, bites and stings, muscle strains from carrying heavy loads, feet bruised by the terrible uneven surfaces, and enduring still greater horrors, starvation, diseases, broken or deformed limbs, blindness? Not one of the savages, not even the baby and its young mother, was sound and clean. Their lesions and sores and scabs and calluses, bleared eyes, twisted limbs, filthy feet, filthy hair had only become more painful to look at as he began to know them as people. He had kept wanting to help them.

As he stood now on the v-path there was a noise near him in the darkness of the trees and long stringy plants, epiphytes like Yao's, only huge and knotted. Something among all these weird crowded-together lives that made the jungle had made a noise. He stood stiller than ever, remembering the garan.

He had gone with the men of the savage tribe, understanding that they were doing "hunting." They had glimpsed a flash of spotted golden light. One of the men had whispered a word, *garan*, which he remembered when he came back. He looked for it but it was not in the dictionary.

Now it came out of the chaos-darkness, the garan. It walked across the pathway from left to right a few meters in front of him. It was long, low, golden with black spots. It walked with indescribable softness and skill on four round feet, the head low, followed by a long graceful extension of itself, a tail, the tip just twitching as it vanished into the darkness again in utter silence. It never glanced at Luis.

He stood transfixed. It's VR, it's a program, he said to himself. Every time I came into Jungle, if I stood here just so long, the garan would walk across the path. If I was ready for it, if I wanted to, I could shoot at it with my v-gun. If the program includes "hunting," I would kill it. If the program doesn't include "hunting," my gun wouldn't fire. I could not make anything happen. The garan would walk on and vanish in silence, the tip of its tail just twitching as it disappears. This is not the wilderness. This is not nature. This is supreme control.

He turned around and walked out of the program.

He met Bingdi on his way to the gym to run laps. "I want to develop a technology for VU," he said.

"Sure," Bingdi said, after a moment, and grinned. "Let's do it."

Where Are We Going?

Programs, photographs, descriptions—all representations of Dichew were suspect, since they were products of technology, of the human mind. They were interpretations. The planet of origin was

inaccessible to direct understanding.

The planet of destination was less even than that. As he continued to explore the Library, Luis began to understand why the Zero Generation had been so eager for information about Shindychew. They had none.

The discovery of what they called a "Terran planet" within "accessible range" had set off the whole *Discovery* project. The sub-Zeroes had studied it as exhaustively as their instruments permitted. But neither spectrum analysis nor any form of direct observation of a small non-self-luminous body at that distance could tell them all they needed to know. Life had been established as a universal emergent within certain parameters, and all the parameters they were able to establish were highly favorable. All the same, as he read in an ancient article called "Where Are They Going?" it was possible that a very small difference from "Earth" could make "New Earth" utterly uninhabitable for humans. Chemical incompatibility of the life forms with human chemistry, making everything there poisonous. A slightly different balance of the gases of the atmosphere, so that people could not breathe the air.

Air is freedom, Luis thought.

The Librarian was reading at a table nearby. Luis went over and sat down by him. He showed old Tan the article. "It says it's possible that we won't be able to breathe there."

The Librarian glanced over the article. "I certainly won't be able to," he observed. After the usual pause between sentences, he explained. "I'll be dead." He smiled a benign, semi-circular smile.

"What I'm trying to find," Luis said, "is something about what they expected us to do when we got there. Are there instructions somewhere—for the various possibilities—?"

"At present," the old man said, "if there are such instructions, they are sealed."

Luis started to speak, then stopped, waiting for Tan's pause to end.

"Information has always been controlled."

"By whom?"

"Primarily, by the decisions of the Zero Generation. Secondarily, by the decisions of the Educational Council."

"Why would the Zeroes hide information about our destination? Is it that bad?"

"Perhaps they thought, since so little was known, the middle generations needn't worry about it. And the Sixth Generation would find out. And send them the information. This is a voyage of scientific discovery." He looked up at Luis, his face impassive. "If the air is not breathable, or there are other problems, people can go out in suits.

Evamen. Live inside, study outside. Observe. Send information to the *Discovery* in orbit. And thence back to Ti Chiu." He pronounced the Chinese word in Chinese. "There are Unreplaceable Supplies for twelve generations, not six. In case we could not stay there. Or chose not to. Chose to go back to Ti Chiu."

It took Tan quite a while to say all this. Luis's mind filled the pauses with imaginings, as if he were illustrating a text: the vast trajectory slowing, slowing towards a certain star; the little shipworld hovering above the surface of the immense planetworld; tiny figures in evasuits swarming out into Jungle…Vivid, improbable. Virtual Unreality.

"'Back,'" he said. "What's 'back'? None of us came from Dichew. Back or forward, what's the difference?"

"'How much difference between yes and no? What difference between good and bad?'" the old man said, looking at him approvingly, yet with that expression in his eyes that Luis could not interpret. Was it sorrow?

He knew the quotation. Hsing and her father Yao had both studied with 3-Tan, who as well as being the Librarian was a scholar of the Chinese classics, and all three were fans of Old Long-Ears. Growing up in Quad Two, Luis had heard the book quoted till he read a translation of it in self-defense. Recently he had re-read it, trying to figure out how much of it made sense to him. Liu Yao had copied the whole thing out in the ancient Chinese characters. It had taken over a year. "Just practicing calligraphy," he said. Watching the complex, mysterious figures flow from Yao's brush, Luis had been moved more strongly than he ever had been moved by the seemingly comprehensible translated words. As if not to understand was to understand.

Circulation

Paper, made from rice straw, was rare stuff. Little writing was done by hand. Yao had got permission to use several meters of paper for his copying, but he could not keep it out of circulation for long. He gave pieces of the scroll to Chi-An friends. They would put them up on the wall for a while, then recycle them. No inessential artifact could survive more than a few years. Clothes, artworks, paper copies of texts, toys, all were given back to the cycle, sometimes with a ceremony of grief. A funeral for the beloved doll. The portrait of Grandfather might be copied into the electronic memory bank when the original was recycled. Arts were practical or ephemeral or immaterial—a wedding shirt, bodypaint, a song, a story in an allnet

magazine. The cycle was inexorable. The people of *Discovery* were their own raw material. They had everything they needed, they had nothing they could keep. The only poverty such a world could suffer would follow from the loss or waste of energy/matter tied up in useless objects or ejected into space.

Or, in the very long run, from entropy.

Once upon a time a dermatologist doing eva to repair a slight encounter-graze on the underhull had tossed his alloy gun to his companion a few meters away, who missed the catch. The film-story of the Lost Gun was a dramatic moment in second-grade Ecology. Oh! the children cried in horror as the tool, gently revolving, drifted among the stars, farther and farther away. There—look—it's going to away! It's going to away forever!

The light of the stars moved the world. Hydrogen acceptors fed the tiny fusion reactors that powered the electrical and mechanical systems and the Fresno accelerators that sped *Discovery* on its way. The little world was affected from outside only by dust and photons. It accepted nothing from outside but atoms of hydrogen.

Within itself it was entirely self-sustaining, self-renewing. Every cell shed by human skin, every speck of dust worn from a fabric or a bearing, every molecule of vapor from leaf or lung, was drawn into the filters and the reconverters, saved, recombined, re-used, reconfigured, reborn. The system was in equilibrium. There were reserves for emergencies, never yet called upon, and the store of Unreplaceable Supplies Tan had mentioned, some of them raw materials, others hi-tech items which the ship lacked the means to duplicate: a surprisingly small amount, stored in two cargobays. The effect of the second law of thermodynamics operating in this almost-closed system had been reduced to almost-nil.

Everything had been thought about, seen to, provided for. All the necessities of life. *Why am I here? Why am I?* A purpose for living: a reason. That, too, the Zeroes had tried to provide.

For all the middle generations of the two-century voyage, their reason for being was to be alive and well, to keep the ship in good running order, and to furnish it with another generation, so that it could accomplish its mission, their mission, the purpose to which they were all essential. A purpose which had meant so much to the Zeroes, the earthborn. Discovery. Exploration of the universe. Scientific information. Knowledge.

An irrelevant knowledge, useless, meaningless to people living and dying in the closed, complete world of the ship.

What did they need to know that they didn't know?

They knew that life was inside: light, warmth, breath, companionship. They knew that outside was nothing. The void. Death.

Death silent, immediate, absolute.

Syndromes

"Infectious diseases" were something you read about or saw hideous pictures of in history films. In every generation there were a few cancers, a few systemic disorders; kids broke their arms, athletes overdid it; hearts and other organs went wrong or wore out; cells followed their programs, aged, died; people aged, died. A major responsibility of doctors was seeing that death did not come too hard.

The angels spared them even that responsibility, being strong on "positive dying," which made of death a devout communal exercise, leading the dying person into trance induced by hypnosis, chanting, music, and other techniques; the death itself was greeted by ecstatic rejoicing.

Many doctors dealt almost entirely with gestation, birth, and death: "easy out, easy in." Diseases were words in textbooks.

But there were syndromes.

In the First and Second Generations many men in their thirties and forties had suffered rashes, lethargy, joint pains, nausea, weakness, inability to concentrate. The syndrome was tagged SD, somatic depression. The doctors judged it to be psychogenic.

It was in response to the SD syndrome that certain areas of professional work had been gender-restricted. A measure was put up for discussion and vote: men were to do all structural maintenance and dermatology. The last—repair and upkeep of the skin of the world where it interfaced with space—was the only job that required doing eva: going outside the world.

There were loud protests. The "division of labor," perhaps the oldest and deepest-founded of all the institutions of power-imbalance—was that irrational, fanciful set of prescriptions and proscriptions to be reinstituted here, where sanity and balance must, at the cost of life itself, be preserved?

Discussions in Council and quad meetings went on for a long time. The argument for gender-restriction was that men, unable to bear and nourish children, needed a compensatory responsibility to valorise their greater muscular strength as well as their hormone-related aggressivity and need for display.

A great many men and women found this argument insupportable in every sense of the word. A slightly larger number found it convincing. The citizens voted to restrict all evas to men.

After a generation had passed, the arrangement was seldom questioned. Its popular justification was that since men were

biologically more expendable than women they should do the dangerous work. In fact no one had ever been killed doing eva, or even taken a dangerous dose of radiation; but the sense of danger glamorised the rule. Active, athletic boys volunteered for dermatology in numbers far larger than were needed, and so served on a reserve rota with regular training evas. Evamen had a distinctive way of dressing: brown canvas shorts, a carefully embroidered sleeve-patch of stars on black.

The outbreak of SD had leveled off eventually to a low endemic level, a drop that some said was connected to the eva restrictions and some said was not.

The Thirds had dealt with a high incidence of spontaneous abortions and stillbirths, never explained, and fortunately lasting only a few years. The episode had caused an increase in late pregnancies and two-child families until the optimum replacement ratio was recovered.

In the Fourth and Fifth generations a perhaps related, even more debilitating set of symptoms appeared, diagnosed but as yet unexplained, tagged TSS, tactile sensitivity syndrome. The symptoms were random pains and extreme neural sensitivity. TSS sufferers avoided crowds, could not eat in the refectories, complained that everything they touched hurt; they used dark glasses and earplugs and covered their hands and feet with things called sox. As no explanation or cure had been found, myths of prevention sprang up and folk remedies flourished. Quad Two had a low incidence of TSS, and so the Chi-An food style—rice, soy, ginger, garlic—was imitated. A reclusive life seemed to ease the symptoms, so some people with TSS tried to keep their children out of kidherd and school. But here the law intervened. No parental decision was permitted to impair the welfare of the child and of the community as determined by the Constitution and the judgment of the Council on Education. The children went to school and suffered no visible ill effects. Dark glasses, earplugs, and sox were a brief fad among high-schoolers, but the disorder affected few people under twenty. The angels asserted that no practitoner of Bliss suffered from TSS, and that to escape it, all you had to do was learn to rejoice.

Ancestors of the Angels

0-Kim Jan had been the youngest of the Zeroes, ten days old at Embarkation.

0-Kim Jan was a power in the Council for many years. Her genius was for organisation, order, a firm, impartial administration. The Chi-

Ans called her Lady Confucius.

She had a late-born son, 1-Kim Terry. Her son led an obscure life, interrupted by bouts of somatic depression, as a programmer for the primary schools innet, until 0-Kim died in the year 79. She was the last of the Zeroes, the earthborn. Her death was felt as momentous.

Her funeral was attended by a very great crowd, far too many even for the Temenos to hold. The ceremony was broadcast on the allnet. Almost every person in the world watched it and so saw the inception of a new religion.

Church and State

The Constitution was explicit in decreeing the absolute separation of creed from polity. Article 4 specifically named the monotheisms that figured so large in history, including the religion that had controlled the dominant governments at the time the voyage of *Discovery* was planned. Any attempt "to influence an election or the deliberation of a legislative body by overt or covert invocation of the principles or tenets of Judaism, Christianity, Islam, Mormonism, or any other religious creed or institution," if confirmed by an ad hoc committee on Religious Manipulation, could be punished by public reprimand, loss of office, or permanent disqualification from any position of responsibility.

In the early decades there had been many challenges to Article 4. Though the planners had consciously tried to select *Discovery*'s crew for what they saw as scientific impartiality of mind, the monotheist tendency to limit understanding to a single mode was already deeply embedded in much of their science. They had expected that in a deliberately, widely heterogeneous population the practice of tolerance would be not so much a virtue as a necessity. Still, in the Zero Generation, after several years of space travel people who had never given religion much thought, or who had thought of it as inimical, often took to identifying themselves as Mormon, Muslim, Christian, Jew, Buddhist, Hindu. They had found that religious affiliations and practices gave them needed support and comfort in their sudden, utter, irrevocable exile from everyone on Earth and from the Earth itself.

Faithful atheists were incensed by this outbreak of piety. Actual memories of the horrors of the Fundamentalist Purification and historical evidence of endless genocides in the name of God cast their shadows across the mildest forms of public worship. Eclecticism waved its ineffectual hands. Accusations were hurled, challenges made. Ad hoc Committees on Religious Manipulation were convened

and reconvened.

But the generations after the Zeroes had no experience of exile; they lived where they were born, where their parents had been born. And miscegenation made ancestral pieties irrelevant. It was difficult for a Jewish Presbyterian Parsee to choose which of his Puritanisms to obey. It was not difficult to forgo the incompatible righteousnesses of a Sunni-Mormon-Brahmin inheritance.

When 0-Kim died, Article 4 had not been invoked for years. There were religious practices, but no religious institutions. Practice was private or familial. People sat vipassana or zazen, prayed for guidance or in praise. A family celebrated the birth of Jesus or the kindness of Ganesh or the memory of the Passover on more or less appropriate days of the monthless year. Of all ceremonies, funerals, which were always public, were the most likely to bring the trappings as well as the essentials of religion into play. Beautiful old words in beautiful old languages were spoken, and rites of mourning and consolation were observed.

The Funeral and the Birth of Bliss

0-Kim had been a militant atheist. She had said, “People need God the way a three-year-old needs a chainsaw.” Her funeral was scrupulously free of references to the supernatural or quotations from holy books. People spoke briefly—some not briefly enough—about her effect on their life and everyone’s life, about her charisma, her incorruptibility, her powerful, parental, practical care for the future generations. And they spoke with emotion of this death of the “Last of the Earthborn.” Children of children watching this ceremony, they said, would be alive when the Mission that the Founders sent forth came at last to its fulfilment—when the Destination was reached. Kim Jan’s spirit would be with them then.

Finally, as was customary, the child of the deceased rose to say the last words.

1-Kim Terry came up on the podium in front of the people and the innet camcorders beside the bier where his mother’s body lay draped in white. There was great intensity and purposefulness in his movements. To people who knew him, he looked changed—assured, calm. He was not tearful or shaky-voiced. He looked out over the crowd that filled the whole floor of the Temenos. “He shone,” several people said later.

“The last of those whose body was born of Earth is gone,” he said in a clear, strong voice, which reminded many of his mother, a fine speaker in Council. “She has gone to the glory of which her body was

the bright shadow. We here, now, travel away from the body into the realm of the soul. We are free. We are utterly free of darkness, of sin, of Earth. Through the corridors of the future I bring the message to you. I am the messenger, the angel. And you, you are angels. You are the chosen. God has called you, called you by name. You are the blessed. You are divine beings, sacred souls, who have been called to live in bliss. All that remains to us to do is to know who we are, that we are the inhabitants of heaven. That we are the blessed, the heavenborn, chosen for the eternal voyage. That we are, each one of us, sacred, born to live in bliss and die to greater bliss." He raised his arms in a great, dignified gesture of blessing over the startled, silent multitude.

He spoke on for another twenty minutes.

"Unhinged with grief," some people said as they left the Temenos or turned off the set; cynics responded, "Maybe with relief?" But many people discussed the ideas and images Kim Terry had put into their minds, feeling that he had given them something they had craved without knowing it, or felt without being able to say it.

Becoming Angels

The funeral had been epochal. Now that no living person in the world remembered the planet of origin, was there any reason to think anyone there remembered them? Of course they sent out radio messages concerning the progress of the *Discovery* regularly, as specified in the Constitution, but was anybody listening?

"Orphans of the Void," a mawkish song with a good tune, sung by the Fourth Quad group Nubetels, became a rage overnight. And people talked about 1-Kim Terry's speech.

They went by his homespace to talk to him, some concerned, some curious. They were received by a couple named 2-Patel Jimmy and 2-Lung Yuko, his next-door neighbors. Terry is resting, they said, but he'll talk this evening. Did you feel the wonderful feelings while he was speaking in the Temenos? they asked. Did you see how different, how changed he is? We've watched him change, they said, watched him become wise, radiant, eloquent. Come hear him. He'll speak this evening.

For a while it was a kind of fad to go hear Terry speak about Bliss. There were jokes about it. Atheists railed about cult hysteria and hypocritical egotrippers. Then some people forgot about it, and others kept going to the Kim homespace cycle after cycle, year after year, for the evening meetings with Terry, Jimmy, and Yuko. People held meetings in their own homespaces, with little feasts, songs,

meditations, devotions. They called these meetings angelic rejoicings, and called themselves friends in bliss, or angels.

When these followers of Kim Terry began to preface their kin-name with Angel as a kind of title, there was a good deal of disapproval and discussion in the councils. The angels agreed that such group identification was potentially divisive. Terry himself told his followers not to go against the will of the majority: "For, whether or not we know it, are we not all angels?"

Yuko, Jimmy, and Jimmy's little son Inbliss lived with Terry in the homespace he had shared with his mother. They led the nightly meetings. Kim Terry himself become increasingly reclusive. In the early years he now and then spoke to meetings held in the Quad One Circus or the Temenos, but as the years went by he appeared less and less often in public, speaking to his followers only over the innet. To those who went to the meetings at his homespace he might appear briefly, blessing and encouraging them; but his followers believed that his bodily presence was unimportant compared to his angelic presence, which was continual. Bodily matters darkened bliss, obscuring the soul's needs. "The corridors I walk are not these corridors," Terry said.

His death in the year 123 brought on a deep hysteria of mourning combined with festivity, for his followers, embracing his doctrine of Actuality as explained by his energetic interpreter, 3-Patel Inbliss, celebrated his apparent death as a rebirth into the Real World, to which the shipworld was merely the means of access, the "vehicle of bliss."

Patel Inbliss lived on alone in the Kim homespace after Terry's and his parents' death, holding meetings there, speaking at home Rejoicings, talking on the innet, working on and circulating the collection of sayings and meditations called *The Angel to the Angels*. Patel Inbliss was a man of great intelligence, ambition, and devotion, with a genius for organisation. Under his guidance the Rejoicings had become less disorderly and ecstatic, indeed were now quite sedate. He discouraged the wearing of special clothing—undyed shorts and kurtas for men, white clothing and headscarves for women—which many angels had adopted. To dress differently was divisive, he said. Are we not all angels?

Under his leadership, indeed, more and more people declared themselves to be angels. The number of conversions in the first decades of the second century brought on a call for an Article 4 hearing on Religious Manipulation by a group who claimed that Patel Inbliss had formed and promulgated a religious cult which worshipped Terry as a god, thus threatening secular authority. The Central Council never actually called a committee to investigate the charge. The

angels asserted that, though they venerated Kim Terry as a guide and teacher, they held him to be no more divine than the least of them. Are we not all angels? And Patel Inbliss argued cogently that the practice of Bliss in no way conflicted with polity and governance, but on the contrary supported it in every particular: for the laws and ways of the world were the laws and ways of Bliss. The Constitution of *Discovery* was holy writ. The life of the ship was bliss itself—the joyful mortal imitation of immortal reality. "Why would the followers of perfect law disobey it?" he asked. "Why would those who enjoy the angelic order seek disorder? Why would the inhabitants of heaven seek any other place or way to live?"

Angels were, in fact, extremely good citizens, active and cooperative in all civic duties, ready to fulfil communal obligations, diligent committee and Council members. In fact, more than half the Central Council at the time were angels. Not seraphim or archangels, as the very devout and those close to Patel Inbliss were nicknamed, but just everyday angels, enjoying the serenity and good fellowship of the Rejoicings, which were by now a familiar, accepted element of life for many people. The idea that the beliefs and practices of Bliss could in any way run counter to morality, that to be an angel was to be a rebel, was clearly ridiculous.

Patel Inbliss, now in his seventies, indomitably active, still occupied the Kim homespace.

Inside, Outside

"Could it be that there are two kinds of people…" Luis said to Hsing. Then he paused for so long that she replied crisply, "Yes. Possibly even three. Daring thinkers have postulated as many as five."

"No. Only two. People who can roll their tongue sideways into a tube and people who can't."

She stuck out her tongue at him. They had known since they were six that he could make his tongue into a tube and whistle through it, that she couldn't, and that it was genetically determined.

"One kind," he said, "has a need, a lack, they have to have a certain vitamin. The other kind doesn't."

"Well?"

"Vitamin Belief."

She considered.

"Not genetic," he said. "Cultural. Metaorganic. But as individually real and definite as a metabolic deficiency. People either need to believe or they don't."

She still pondered.

“The ones that do don’t believe that the others don’t. They don’t believe that there are people who don’t believe.”

“Hope?” she offered, tentative.

“Hope isn’t belief. Hope’s contingent upon reality, even when it’s not very realistic. Belief dismisses reality.”

“‘The name you can say isn’t the right name,’” said Hsing.

“The corridor you can walk in isn’t the right corridor,” said Luis.

“What’s the harm in believing?”

“It’s dangerous to confuse reality with unreality,” he said promptly. “To confuse desire with power, ego with cosmos. Extremely dangerous.”

“Oooh.” She made a face at his pomposity. After a while she said, “Is that what Terry’s mother meant—‘People need God like a three-year-old needs a chensa.’ What was a chensa, I wonder?”

“A weapon, maybe.”

“I used to go to Rejoicings sometimes with Rosa before she went seraph. I liked a lot of it, actually. The songs. And when they praise things, you know, just ordinary things, and say how everything you do is sacred. I don’t know, I liked it,” she said, a little defensive. He nodded. “But then they’d get into reading all the weird stuff out of the book, about what the ‘voyage’ really is, and what ‘discovery’ actually means, and I’d get claustro. Basically they were saying that there is nothing at all outside. The whole universe is inside. It was weird.”

“They’re right.”

“Oh?”

“For us—they’re right. There is nothing at all outside. Vacuum. Dust.”

“The stars—the galaxies!”

“Light-specks on a screen. We can’t reach them, we can’t get to them. Not us. Not in our lifetime. Our universe is this ship.”

It was an idea so familiar as to be banal and so strange it unnerved her. She pondered.

“And life here is perfect,” Luis said.

“It is?”

“Peace and plenty. Light and warmth. Safety and freedom.”

Well, of course, Hsing thought, and her face showed it.

Luis pressed on—“You did History. All that suffering. Did anybody in the subzero generations ever live as well as we live? Half as well? Most of them were afraid all the time. In pain. They were ignorant. They fought each other over money and religions. They died from diseases and wars and food shortage. It was all like Inner City 2000 or Jungle. It was hell. And this is heaven. Angel Terry was right.”

She was puzzled by his intensity. “So?”

"So did our ancestors arrange to send us from one hell to another hell, by way of heaven? Do you see potential danger in that arrangement?"

"Well," Hsing said. She considered his metaphor. "Well, for the Sixes, maybe it'll seem kind of unfair. It's not going to make much difference to us. We'll be too doddering to go eva at all, I suppose. Although I'd like to dodder out and see what it looks like. Even if it is hell."

"That's why you're not an angel. You accept the fact that our life, our voyage, has a purpose outside itself. That we have a destination."

"Do I? I don't think so. I just sort of hope we do. It would be interesting to be somewhere else."

"But the angels believe there is nowhere else."

"Then they're in for a surprise when we reach Shindychew," Hsing said. "But then, I expect we all are…Listen, I have to do that chart for Canaval. I'll see you in class."

They were second-year college students, nineteen years old, when they had this conversation. They did not know that sophomores had always discussed belief and unbelief and the purpose of existence.

Words from Earth

Messages had followed, or preceded, them, of course, ever since *Discovery* left the planet Dichew, Earth. During the First Generation many personal messages were received. *Descendants of Ross Betti: Everybody in Badgerwood is rooting for you!* Such transmissions had become rarer as the years went on, and finally vanished. Occasionally there had been major interruptions in reception, once lasting for nearly a year; and as the distance grew, and for some reason particularly during the last five years, distortions and delays and partial losses were the norm. Still, *Discovery* had not been forgotten. Words came. Images arrived. Somebody, or some program, on the Planet of Origin kept sending out a steady trickle of news, information, updates on technology, a poem or a fiction, occasionally whole periodicals or volumes of political commentary, literature, philosophy, criticism, art, documentaries; only all the definitions had changed and you couldn't be sure whether what you were watching or reading was invented or actual, because how could you possibly tell Earth reality from Earth fiction, and the science was just as bad, because they took discoveries for granted and forgot to define the terms they were using. Generations One and Two had spent a lot of time and passion and intelligence analysing and interpreting receptions from Dichew. There had been whole schools of opinion in

Quads One and Four about the reports concerning apparent conflict between what were apparently philosophical-religious schools of thought, or possibly national or ethnic divisions, called (in Arabic) The True Followers and The Authentic Followers. Thousands or millions—the transmissions spoke of billions but this was certainly a distortion or error—at any rate a great number of people on Dichew had killed one another, had been killed, because of this conflict of ideas or beliefs. On *Discovery*, there were violent arguments about what the ideas, the beliefs, the conflicts were. The arguments went on for decades, but nobody died because of them.

By the Third and Fourth Generations the general content of Earth transmissions had become so arcane that only devotees followed them closely; most people paid no attention to them at all. If something important had happened on Dichew somebody or other would notice, and in any case whatever was received went into the Archives. Or was supposed to be going into the Archives.

4-Canaval

When she came to College Center to enroll for her first-year courses, Hsing found that the professor of Navigation, 4-Canaval Hiroshi, had requested that she be skipped over the first year of his course and put into the second. “What if I wasn’t intending to take Nav at all?” she demanded of the registrar, indignant at this high-handed order. But she was flattered; clearly Canaval had been watching the High School math and astro classes, and had his eye on her. She signed up for Nav 2.

Navigation was an honored profession but not a glamorous one, not like being an evaman or an innet entertainer. To many people the idea of navigation was a little threatening. They explained it by saying that in most jobs you could make a mistake and of course it would cause trouble (any event in a glass bowl is likely to affect everything in the glass bowl), but in jobs like atmosphere control and navigation, a mistake could hurt or even kill people—hurt or kill *everybody*.

All the systems were full of failsafes and backups and redundancies, but there was, notoriously, no way to failsafe navigation. The computers, of course, were infallible, but they had to be operated by humans; the course had to be continually adjusted; all the navigators could do was check and re-check their calculations and the computers’ calculations and operations, check and re-check input and feedback, check and correct for error, and keep on doing it, over and over and over. If the calculations and operations all agreed with each other, if it all checked out, then nothing happened. You just did

it all over again forever.

Navigation was about as thrilling as running the bacteria counts, also an unpopular job. And the mathematical talent and training required to do it was formidable. Not many students took Nav for more than the required first year, and very few went on to specialise in it. 4-Canaval was looking for candidates, or victims, as some of his students said.

If the unpopularity of the subject rose from some deeper discomfort, some dread of what it dealt with—the voyage through space, the very movement of the shipworld, its course, its goal—nobody talked about it. But Hsing thought about it sometimes.

Canaval Hiroshi was in his forties, a short, straight-backed man with coarse, bushy black hair and a blunt face, like the pictures of Zen Masters, Hsing thought. He was related to Luis; they were half-cousins; at moments Hsing saw a resemblance. In class he was brusque, impatient, intolerant of error. Students complained: one insignificant mistake in a computer simulation and he tossed the whole thing out, hours of work—"worthless." He was certainly both arrogant and obsessive, but Hsing defended him against charges of megalomania. "It's not his ego," she said. "I don't think he has an ego. All he has is his work. And it does have to be right. Without error. I mean, if we get too close to a gravity sink, does it matter whether it's by a parsec or by a kilometer?"

"All right, but a millimeter isn't going to do any harm," said Aki, who had just had a beautiful charting deleted as "worthless."

"A millimeter now, a parsec in ten years," Hsing said priggishly. She saw Aki roll his eyes. She didn't care. Nobody else seemed to understand the excitement of doing what Canaval did, the thrill of getting it right—not nearly right, but *exactly* right. Perfection. It was beautiful, the work. It was abstract, yet human, even humble, because what you wanted didn't matter. And you couldn't rush it; you had to get all the small things right, take care of all the details, in order to get to the great thing. There was a way to follow. It took constant, ceaseless, alert attention to that way to stay on it. It was not a matter of following your wish or your will, but of following what was. Being aware, all the time, being centered. Celestial Navigation: heaven-sailing. Out there was infinity. Through it there was one way.

And if knowing this went to your head, you always got reminded, immediately and inarguably, that you were completely dependent on the computers.

In third-year Nav, Canaval always gave a problem: *The computers are down for five seconds. Using the coordinates and settings given, plot course for the next five seconds without using the computers.*—Students either gave it up within hours, or worked days at it and then gave it

up as a waste of time. Hsing did not hand the problem back in. At the end of term, Canaval asked her for it. “I thought I’d play around with it in vacation,” she said.

“Why?”

“I like the computations. And I want to know how long it’ll take me.”

“How long so far?”

“Forty-four hours.”

He nodded so slightly that perhaps he didn’t nod, and turned away. He was incapable of showing approval.

He did, however, have a capacity for pleasure, and laughed when he found things funny, usually quite simple things, silly mistakes, foolish mishaps. His laughter was a loud, childish ha! ha! ha! After he laughed he always said, smiling broadly, “Stupid! Stupid!”

“He really is a Zen Master,” she told Luis in the snackery. “I mean really. He sits zazen. He gets up at four to sit. Three hours. I wish I could do that. But I’d have to go to bed at twenty, I’d never get any studying done.” Observing a lack of response in Luis, she said, “And how is your v-corpse?”

“Reduced to a virtual skeleton,” Luis said, still looking a bit absent.

College students chose a professional course in third year. Hsing was in Nav, Luis in Med. They no longer had any classes together, but they met daily in the snackery, the gyms, or the library. They no longer visited each other’s room.

Sex in the Glass Bowl

Lovers do not run away (where is away?). Lovers’ meetings are public matters. Your procreative capacity is a matter of intense and immediate social interest and concern. Contraception is guaranteed by an injection every twenty-five days, for girls from the onset of menstruation, for boys at a time determined by medical staff. Failure to come to the Clinic for your conshot at the due date and hour is followed by immediate public inquiry: Clinic staff people come to your class, your gym, your section, corridor, homespace, announcing your name and your delinquency loud and clear.

People are permitted to go without conshots on the following conditions or undertakings: sterilization, or completion of menopause; a pledge either of chastity or of strict homosexuality; or an intention to conceive, formally declared by both the man and the woman. A woman who violates her undertaking to be chaste or conceives a child with anyone but the declared partner can get a morning-after shot, but

both she and her sexual partner must then go back to conshots for two years. Unauthorised conceptions are aborted. The inexorable social and genetic reasons for all this are made clear during your education. But all the reasons in the world wouldn't work if you could keep your sexual life private. You can't.

Your corridor knows, your family knows, your section, your ancestry, your whole quadrant knows who you are and where you are and what you do and who you do it with, and they all talk. Shame and honor are powerful social engines. If enforced by total publicity and attached to rational need, rather than to hierarchic fantasies and the will to dominate, shame and honor can keep a society running steadily for a long time.

A teenager may move out of the parent's homespace and find a single on another corridor, in another section, even change quadrants; but everybody in that new corridor, section, quad will know who goes in and out your door. They will be observant, and interested, and vigilant, and curious, and mostly well-disposed, and always hoping for a scandal, and they will talk.

The Warn, or Warren, was the first place many young people moved to when they left parentspace. It was a set of corridors in Quad Four, close to the College; all the spaces were singles; due to the shape of the housing of the main accelerator, walls in the Warn weren't all at right angles, and some of the spaces were substandard size. The students moved partitions around and created a maze of cubicles and sharespaces. The Warn was noisy and disorganised and smelled of dirty clothes. Sleep there was occasional, sex was casual. But everybody turned up on time at Clinic for their conshot.

Luis lived near the Warn in a triple with two other medical students, Tan Bingdi and Ortiz Einstein. Hsing was still in the Quad Two homespace with Yao. She had a twenty-minute walk to and from college daily.

After the usual adolescent period of experimenting around, when she entered college Hsing had pledged chastity. She said she didn't want conshots controlling her body's cycles, and didn't want emotion controlling her mind; not till she was through college.

Luis continued to get his conshot every twenty-five days, did not pledge, but did not go to bed with any of his friends. He never had. His only sexual experiences had been the general promiscuities of teenparties.

They knew all this about each other because it was public knowledge. When they were together they didn't talk about these matters. Their silences were as deeply and comfortably mutual as their conversations.

Their friendship was of course equally public. Their friends

speculated freely about why Hsing and Luis didn't have sex and whether and when they'd get around to it.

Beneath their friendship was something that was not public, and was not friendship: a pledge made without words, but with the body; a non-action with profound results. They were each other's privacy. They had found where away was. The key to it was silence.

Hsing broke the pledge, broke the silence.

"Reduced to a virtual skeleton," Luis said absently, evidently thinking of something other than the v-cadaver which had been teaching him Anatomy. The cadaver had been programmed by its ghoulish author to guide and chastise the apprentice dissector. "The medulla, idiot!" it would whisper cavernously from moveless lips and lungless rib-cavity, or "Surely you don't take *that* for the caecum?" Hsing liked to hear what the cadaver had been saying. If you made no mistakes it occasionally rewarded you with bursts of poetry. "Soul clap hands and sing, and louder sing!" it had cried, even as Luis removed the larynx. But he had no cadaver-tales for her today, and went on sitting at the snackery table, brooding.

She said, "Luis, Lena—"

Luis held up his hand so quickly, so silently, that she fell silent, having said nothing but the name.

"No," he said.

There was a very long pause.

"Listen. Luis. You're free."

His hand was up again, warding off speech, defending silence.

She insisted: "I want you to know that you are—"

"You can't free me," he said. His voice was deepened by anger or some other emotion. "Yes. I'm free. We both are."

"I only—"

"Don't, Hsing! Don't!" He looked straight into her eyes for an instant. He stood up. "Let it be," he said. "I have to go." He strode off among the tables. People said "Hi, Luis" and he did not answer. People saw a quarrel. Hsing and Luis had a fight in the snackery today. Hey, what's up with Hsing and Luis?

Yin Yang

A young woman may find it difficult to withstand the urgent sexual advances of an older man in a position of power or authority. Her resistance is further compromised if she finds him attractive. She is likely to deny both the difficulty and the attraction, wishing to maintain her freedom of choice and that of other women. If her desire for independence is strong and clear, she will resist the pressure of his

desire, she will resist her own longing to match the strength of her yielding to the strength of his aggression, to take him into herself while crying "Take me!"

Or she may come to see her freedom precisely in that yielding. Yin is her principle, after all. Yin is called the negative principle, but it is Yin that says "Yes."

They met again in the snackery a while after commencement. Both were in intense training in their chosen specialties, Luis interning at the Central Hospital, Hsing as an apprentice in the Bridge Crew. Their work consumed them. They had not seen each other alone for two or three tendays.

She said, "Luis, I'm living with Canaval."

"Somebody said you were." He still spoke with that vagueness, absentness, a kind of soft cover over something hard and set.

"I just decided to last week. I wanted to tell you."

"If it's a good thing for you…"

"Yes. It is. He wants us to marry."

"That's good."

"Hiroshi is—he's like the fusion core. It's exciting to be with him." She spoke earnestly, trying to explain, wanting him to understand. It was important that he understand. He looked up suddenly, smiling. Her face turned dusky red. "Intellectually, emotionally," she said.

"Hey, flatface, if it's good it's good," he said. He leaned over and lightly kissed her nose.

"You and Lena—" she said, eager.

He smiled a different smile and replied quietly, mildly, absolutely, "No."

Integrity

It wasn't that there were pieces missing from Hiroshi. He was complete. He was all one piece. Maybe that's what was missing—bits of the other Hiroshis who might have read novels, or played solitaire, or stayed in bed late mornings, or done anything but what he did, been anyone other than what he was.

Hiroshi did what he did and doing it was what he was.

Hsing had thought, as a young woman might think, that her being in his life would enlarge it, change it. She understood very soon after she came to live with him that the arrangement had changed her life greatly and his not at all. She had become part of what Hiroshi did. An essential part, certainly: because he did only what was essential. Only she had never truly understood what he did.

That understanding made a greater change in her thinking and her life's course than having sex and living with him did. Not that the pleasures, tensions, and discoveries of sex didn't engage and delight and often surprise her; but she found sex, like eating, a splendid physical satisfaction which did not take up a great deal of her mind or even her emotions. Those were occupied by her work.

And the discovery, the revelation Hiroshi brought her, had nothing to do, or seemed to have nothing to do, with their partnership. It concerned the work he did, they did. Their whole life. The life of everybody in the worldship.

"You got me to live with you so you could co-opt me," she said to him, half a year or so later.

He replied with his usual honesty—for though everything he did served to conceal and perpetuate a deception, he made scrupulous efforts never to lie to a friend—"No, no. I trusted you. But it simplified everything. Doesn't it?"

She laughed. "For you. Not for me! For me everything used to be simple. Now everything's double…"

He looked at her without speaking for a while; then he took her hand and gently put his lips against her palm. He was a formally courteous sexual partner, whose ultimate surrender to passion always moved her to tenderness, so that their lovemaking was a reliable and sometimes amazing joy. All the same she knew that to him she was ultimately only fuel to the fusion core—an element in his overriding, single purpose. She told herself that she did not feel used, or tricked, because she knew now that everything was fuel to Hiroshi, including himself.

Errors

They had been married for three days when he told her what the purpose of his work was—what he did.

"You asked me a year ago about discrepancies in the acceleration records," he said. They were eating alone together in their homespace. Honeymooning, it was called, a word that didn't have many reverberations in this world without honey or bees to make it, without months or a moon to make them. But a nice custom.

She nodded. "You showed me I'd left out some factor. I don't remember what it was."

"Falsehood," he said.

"No, that isn't what you said. The constant of—"

He interrupted her. "What I said was a falsehood," he said. "A deliberate deception. To lead you astray. Make you think you'd made

an error. Your computations were perfectly correct, you omitted nothing. There are discrepancies. Much greater discrepancies than the one you found."

"In the acceleration records?" she said stupidly.

Hiroshi nodded once. He had stopped eating. She knew that when he spoke so quietly he was very tense.

She was hungry, and pushed in one good supply of noodles before she put her chopsticks down and said, through noodles, "All right, what are you telling me?"

His face was strained. His eyes lifted to hers for a moment with an expression of desperation? pleading?—so uncharacteristic that it shocked her, moved her as his vulnerability in lovemaking did. "What's wrong, Hiroshi?" she whispered.

"The ship has been decelerating for over four years," he said.

Her mind moved with terrific rapidity, running through implications, explanations, scenarios.

"What went wrong?" she asked at last, quite steadily.

"Nothing. The deceleration is controlled. Deliberate."

He was looking down at his bowl. When he glanced up at her and at once looked down again, she realised that he feared her judgment. That he feared her. Though, she thought, his fear would not influence his actions or his words to her.

"Deliberate?"

"A decision made four years ago," he said.

"By?"

"Four people on the Bridge. Later, two in Administration. Four people in Engineering and Maintenance also know about it now."

"Why?"

The question seemed to relieve him, perhaps because it was asked quietly, without protest or challenge. He answered in a tone more like his usual one, even with a touch of the lecturer's assurance and acerbity. "You asked what's wrong. Nothing is. Nothing went wrong. We have always been on course, with almost no deviance. But an error did occur. An extraordinary, massive error. Which allowed us to take advantage of it. Error is opportunity. Chierek and I spotted it. A fundamental, ongoing error in the trajectory approximations, dating from our passage through the CG440 sink, five years ago, in Year 154. What happened during that passage?"

"We lost speed," she answered automatically.

"We gained it," he said. He glanced up to meet her incredulity. "Our acceleration increase was so great and so abrupt that the computers assumed a factor-ten error and compensated for it." He paused to make sure that she was following him.

"Factor *ten?*"

"By the time Chierek came to me with the figures and I realised that it could only be explained as a computer compensation error, we'd accelerated to .82 and were forty years ahead of schedule."

She was indignant at his joking, trying to fool her, saying these enormities. "Point eight two is not possible," she said, cold, dismissive.

"Oh yes," Hiroshi said with a grin that was equally cold, "it's possible. It's actual. We did it. We traveled at .82 for ninety-one days. Everything you know about acceleration, Gegaard's calculations, the massgain limit—it was all wrong. That's where the errors were! In the basic assumptions! Error is opportunity. It's all clear enough, once you have the records and can do the computations. We can tell the physicists back on Dichew all about it when we get to Shindychew. Tell them where they went wrong. Tell them how to use a sink to whiplash an object up to eight tenths lightspeed. This is the voyage of the *Discovery*, all right. We could have made it in eighty years." His face was hard with triumph, the conqueror's face. "We're going to arrive at the target system five years from now," he said. "In the first half of Year 164."

She felt nothing but anger.

"If this is true," she said at last, slowly and without expression, "why are you telling me now? Why are you telling me at all? You've kept this from everybody else. Why?"

It was not only the enormous shock of what he was telling her, it was his victorious look, his triumphant tone, that brought up the surge of rage in her—the opposition he had feared at the beginning, the question *How dare you?* But her anger now didn't affect him; he was unshaken, borne up by his conviction of rightness.

"It's the only power we have," he said.

"'We?' Who?"

"We who aren't angels."

To Count the Number of Angels

When Luis was told that the Educational Agenda for the Sixth Generation was not accessible because it was being revised, he said, "But that's what I was told when I asked to see it eight years ago."

The woman on the Education Center info screen, a motherly sort, shook her head sympathetically. "Oh, it's always under revision or under consideration, angel," she said. "They have to keep updating it."

"I see," said Luis, "thank you," and switched out.

Old Tan had died two years ago, but his grandson was a promising replacement. "Listen, Bingdi," Luis said across their

sharespace, “does the bodycount register angels?”

“How should I know?”

“Librarians are the masters of useful trivia.”

“You mean, are angels listed as such? No. Why would they be? The old religious affiliations weren’t ever listed. Listing would be divisive.” Bingdi did not speak quite as slowly as his grandfather, but in a similar rhythm, each sentence followed by a small, thoughtful silence, a quarternote rest. “I suppose Bliss is a religious affiliation. I don’t know how else it could be defined. Though I’m not sure how religion is defined.”

“So there’s no way to know accurately how many angels there are. Or put it another way: There’s no way to know who is an angel and who isn’t.”

“You could ask.”

“Certainly. I will.”

“You’ll go from corridor to corridor throughout the world,” Bingdi said, “inquiring of each person you pass, Are you an angel?”

“‘Are we not all angels?’” said Luis.

“Sometimes it seems that way.”

“It does indeed.”

“What are you getting at?”

“It’s what I can’t get at that worries me. The education program for the Sixes, for instance.”

Bingdi looked mildly startled. “Are you planning on procreating a baby Six?”

“No. I want to find out something about Shindychew. The Sixes are going to land on Shindychew. It seems reasonable to assume they’ll be educated to do so. Informed of what to expect. How to cope with living outside. Trained in doing long-term eva on a planet surface. That’s going to be their job, after all. The Zeroes must have included information on it in the education program. Your grandfather said they did. Where is it? And who is going to train them?”

“Well, there aren’t any Sixes even wearing clothes yet,” Bingdi said. “A bit soon to terrify the poor little noodles with tales of an unknown world, isn’t it?”

“Better too soon than never,” said Luis. “Destination Date is forty-four years from now. *We* might want to go do eva on Shindychew. Dodder forth, as Hsing put it.”

“May I think about it after a couple of decades?” Bingdi said. “Just now I need to finish this bit of useful trivia.”

He turned to his screen, but in a minute he looked round again at Luis. “What’s the connection of that with the number of angels?” he said, in the voice of one who glimpses the answer as he asks the question.

She did not know 5-Chin Ramon well, though he was one of Hiroshi's circle. He had been on the Managerial Counsel for a couple of years now. She had not voted for him. He identified as Chinese Ancestry and lived in Pine Mountain Compound, which was mostly Chins and Lees. A lot of the Chins had become angels early on. Ramon had risen, as they said, high in Bliss. He seemed a colorless, conventional man; like many male angels he treated women in a defensive, distancing, facetious manner Hsing found despicable. She had been displeased as well as very surprised to find he was one of the ten—now eleven—people who knew that the ship was decelerating towards an early arrival at the Destination.

"So you made this tape without telling the people you were taping them?" she asked him, not trying to keep contempt and distrust out of her voice.

"Yes," Ramon said, without expression.

Ramon had had a crisis of conscience: so Hiroshi said. 5-Chatterji Uma explained it to Hsing. Hsing liked and admired Uma, a bright, elegant little woman, elected to chair the Managerial Counsel four years running; she had to listen to her. Ramon, Uma explained, had been admitted to Patel Inbliss's inner circle, the archangels; and what he heard and learned there had so disturbed him that he had broken his vow of secrecy, made notes of things said among the archangels, and given them to Uma. She had taken his report to Canaval and the others. They had requested Ramon to prove his allegations. So he had surreptitiously taped a session of the archangels.

"How can you trust a person who would do such a thing?" Hsing had demanded.

"It was the only way he could provide us evidence." Uma had looked with sympathy at Hsing. "Paranoid suspicions—rumors of plots to take over navigation, tamper with our genes, put untested drugs in the water supply—how many have we all heard! This was the only way Ramon could convince us that he wasn't paranoid, or simply malicious."

"Tapes are easy to fake."

"Fakes are easy to spot," said 4-Garcia Teo with a smile; he was a big, craggy, kindly engineer whom Hsing could not help trusting, hard as she was working to distrust everybody in this room. "It's real."

"Listen to it, Hsing," Canaval said, and she nodded, though with a sullen heart. She hated it, this secrecy, lying, hiding, plotting. She did not want to be part of it, did not want to be with these people, to be one of them, to share the power they had seized—seized because they had to, they kept saying; but nobody had to lie. Nobody had the right

to do what they were doing, to control everybody's life without telling them.

The voices on the tape meant nothing to her. Men's voices, talking about some business she did not understand, none of her business in any case. Let the angels have their secrets, let Canaval and Uma have theirs, just leave me out of it, she thought.

But she was caught by the sound of Patel Inbliss's voice, a soft, old voice, iron-soft, familiar to her all her life. Through her resistance, her disgust at being forced to eavesdrop, her incredulity, she heard that voice say, "Canaval must be discredited before we can count on the Bridge. And Chatterji."

"And Tranh," said another voice, at which 5-Tranh Golo, also a member of the Counsel, nodded his head in a wry pantomime of thanks-very-much.

"What strategy have you formed?"

"Chatterji is easy," said the other, deeper voice, "she's indiscreet and arrogant. Whispers will cripple her influence. With Canaval it is going to have to be a matter of his health."

Hsing felt a curious chill. She glanced at Hiroshi. He sat as impassive as if in his morning meditation.

"Canaval is an enemy of bliss," said the old voice, Patel's.

"In a position of unique authority," said one of the others, to which the deep voice replied, "He must be replaced. On the Bridge, and in the College. We must have a good man in both those positions." The tone of the deep voice was mild, full of reasoned certainty.

The discussion went on; much of it was incomprehensible to Hsing, but she listened intently now, trying to understand. All at once the tape ended midword.

She started, looked around at the others: Uma, Teo, Golo, and Ramdas, whom she thought of as friends; Chin Ramon and two women, an engineer and a Counsel member, whom she knew as members of the secret circle but did not think of as friends. And Hiroshi, still sitting zazen. They were in Uma's homespace, furnished "nomad style," a recent fad, no biltins, only carpeting and pillows in bright paisleys.

"What was that about your health?" Hsing demanded. "And then they were talking about something about heart valves?"

"I have a congenital heart deformity," he said. "It's on my H-folder."

Everyone had an H-folder: genetic map, health record, school records, work history. You held the code on it; nobody could see your H-folder without your permission, until you died and the file went from Records to Archives. A considerable mystique of privacy

surrounded these personal files. No one but a coparent or a doctor would ever ask to see your H-folder. That anyone could break or steal the code and look at it without your permission was unthinkable. Hsing had not seen Hiroshi's H-folder and had never asked to, since they weren't planning on a child. She did not understand why he had mentioned it.

"Records staff is about ninety percent angels," Ramon said, seeing her blank expression.

She resented his pushing her, forcing her to realise what Hiroshi had meant. She resented Ramon altogether, his too-soft voice, his tight, hard face. Whenever Ramon was around, Hiroshi got tense, too, tight-mouthed, obsessed with all this stuff about the angels taking over. Now Ramon had got control over her too, forcing her to collude, to listen to the tape he'd made betraying people who trusted him.

To her dismay she found that she felt like crying. She had not cried for years. What was there to cry about?

Chatterji Uma's sympathetic gaze was on her. "Hsing," she said quietly, as the others began talking, "when Ramon showed me his notes, I told him to get out. Then I threw up all night."

"But," Hsing said. "But. But *why* would they *do* all this?" Her voice came out unmodulated, loud. The others turned.

Both Ramon and Hiroshi answered: "Power," one said, the other said, "Control."

She did not look at either of them. She looked at the Counselwoman, the woman, for an answer that made sense.

"Because—if I understand it—" Uma said, "Patel Inbliss has taught the angels that our destination is not a stopping place—not a place at all."

Hsing stared. "You mean they think Shindychew doesn't exist?"

"Nothing exists outside the ship. Nothing exists but the Voyage."

Soul, Say What Death Is

> "Rejoice in the voyage of life, from life, to life,
> Life everlasting, bliss everlasting.
> We are flying, O my angels, we will fly!"

All the celebrants sang out the last line, sweet and exultant, and Rose turned to smile at Luis. They sat in a row, Luis, Rosa with her baby Jellika, her husband Ruiz Jen holding his two-year-old Joy on his lap. Angels were strong on what they called "whole families" and "true brotherhood," couples who had and brought up both their

children together. *Mother sweet to cherish, Father strong to guide, little boy, little girl, growing side by side*. Luis's head was full of tags and rhymes and sayings. He had read almost nothing but angelic literature for the last four tendays. He had read *The Angel to the Angels* through twice, and Patel Inbliss's *New Commentaries* three times, and many other texts; he had talked to angel friends and acquaintances, and listened much more than he talked. He had asked Rosa if he could come to Rejoicings with her, and she had of course told him happily that nothing could make her happier.

"I'm not going to become an angel, Rosie," he said, "that's not why I want to come," but she laughed and took his hands—"Oh, you already are an angel, Luis. Don't worry about that. I would just love to bring you into bliss!"

After the singing there was the Session in Peace, during which the celebrants sat in silence until one of them was moved to speak. Luis had come to look forward to these sessions. What was said was usually quite brief—a joy shared, or a fear or sorrow, in trustful expectation of sympathy. The first time he had come with Rosa, she stood up to say, "I am so glad because my dear friend Luis is here!" and people had turned and smiled at her and him. There were cut-and-dried speeches about thankfulness and remembering to be joyful, but often people spoke from the heart. Last meeting, an old man whose wife had died said, "I know Ada is flying in bliss, but I am lonely walking in the corridors without her. If you know how, please help me learn not to grieve her joy."

Today people were shy of talking and said only conventional things, probably because an archangel was present. Archangels visited home or sectional Rejoicings to give brief talks or teachings. Some of them were singers who performed the songs called "devotionals," to which the celebrants listened rapt. Luis had found these songs musically and intellectually rich and complex, and readied himself to listen with interest when the singer, 5-Van Wing, was introduced.

"I will sing a new song," Wing said with angelic simplicity, paused, and began. His unaccompanied voice was a strong, sure tenor. He sang a devotional of a kind Luis had not heard before. The tune was a free, ecstatic outpouring, evidently largely ex tempore, built on a few linked patterns, but the words were at odds with the music; they were allusive, brief, obscure.

> Eye, what do you see?
> Blackness, the void.
> Ear, what do you hear?
> Silence, no voice.
> Soul, say what death is?

Silent, black, outside.
Let life be purified!
Fly ever to rejoice,
O vehicle of bliss!

The last three lines rose in conventionally joyous cadences, but the song had lingered darkly on the words before them, repeating them many times, the singer imbuing them with a tremor of horror which Luis felt as strongly as the others.

It was a remarkable performance, and Van Wing was a real artist, he thought.

He recognised as he did so that he was defending himself against the song, trying to trivialise the effect those lines had had on him.

Soul, say what death is?
Silent, black, outside.

As he went back through the crowded corridors to his homespace in Four, the words kept singing their dark song in his head. When he woke next morning, he understood what they meant to him.

Sitting on his bed he began to write in a blank book Hsing had made for him as a birthday present when they were sixteen. Though he had always used it sparingly, over the years most of the pages had been covered top to bottom and edge to edge with his small clear handwriting. Only a few were left. The flyleaf was inscribed: "A Box to Hold Luis's Mind. Made with Love by Hsing," her name not in letters but in the ancient ideogram: 星. He read the inscription whenever he opened the book.

He wrote: "Life/ship/vehicle/passage: mortal means to immortality (true bliss). Destination metaphorical—for Destination read Destiny. All meaning is inside. Nothing is outside. Outside is nothing. Negation, nil, void: Death. Life is inside. To go outside is denial, is blasphemy." He stared at the last word a while, then leaned over and brought up the OED on his innetscreen. He studied the definition and derivation of "blasphemy" for some time. He then looked up "heresy, heretic, heretical," and then "orthodoxy," which he quit abruptly to begin writing again in the blank book: "Hu. sp. highly ADAPTABLE! Bliss a psych./metaorganic adaptation to existence in transit—near-perfect homeostasis. Follow rules, live inside, live forever. Maladaptation to *arrival*. Arrival equated with phys./spir. DEATH." He paused again, then wrote, "How to counteract, causing least possible argument, factionalism, distress?"

He stopped writing and sat for a long time thinking, brooding.

The soft, steady, unvarying flow of air at 22° C from the atmosphere-intake of his sleepspace stirred the thin leaves of the book and laid them gently down to the right, revealing the flyleaf again. “A Box to Hold Luis’s Mind.” The word love. The ideogram that meant Hsing, that meant star. There really was nobody else to talk to.

She did not answer his first message, and when he got through to her she was busy, sorry, things are so busy just now, I just can’t get away from work…She could not possibly have become self-important. Canaval was self-important, not without justification. But Hsing pompous, Hsing evasive? No. Busy. Why so busy? What kind of work kept one from answering a friend? Probably she was still afraid of him. That grieved him, but it was not a new grief. And since it was herself she feared, not him, it really was her problem, not his. So he insisted. He refused to be put off. “I will come tomorrow at ten,” and at ten he was at the door of her homespace. She was there; Canaval was not. She was brusque, awkward. They sat down facing each other on the biltin couch. “Is something wrong, Luis?”

“I need to tell you what I’ve learned about the angels.”

It was a strange thing to say after half a year of silence between them, he knew that; still, he found her response even stranger. She looked amazed, dismayed. She covered her shock, began to speak, stopped, and finally, with what seemed suspicion, said, “Why me?”

“Who else?”

“What do you think I have to do with anything to do with them?”

Circuitous! Luis thought. He said only, “Nothing. And that’s getting to be rare. This is important, and I need to talk it over with you. I want to know what you think about it. Your judgment. I’ve always thought best when I talked with you.”

She did not loosen up at all. Tense, wary, she nodded grudgingly. She said, “Do you want tea?”

“No, thank you. I’ll talk as fast as I can. Please interrupt if I’m not clear. Tell me if what I say is credible.”

“I don’t find much incredible lately,” she said, dry, not looking at him. “Go ahead, then. I do have to be on the Bridge at ten-forty. I’m sorry.”

“Half an hour will do.”

In half that time he told her what he had to tell. He began with his realisation that the education committees and councils had been controlled for at least twenty years by a large, steady majority of angels. It was now impossible to find what curriculum the Zero Generation had originally planned for the Sixth. Those plans had evidently been deleted—possibly even from the Archives.

Every time he considered that possibility it still shocked Luis, and he did not try to minimise his concern. Hsing continued to conceal

any reaction she felt. He began to wonder if she already knew everything he was telling her. If so, she wasn't admitting that either. He went on.

The elementary and high school curriculum had been scarcely altered since Hsing's and Luis's schooldays. The most striking change was a decrease in information and discussion concerning both Dichew and Shindychew. Children now in school spent very little time learning about the planets of origin and destination. Language concerning them was vague, with a curiously remote tone. In two recent texts Luis had found the phrase, "the planetary hypothesis."

"But in 43.5 years we will arrive at one of these hypotheses," Luis said. "What are we going to make of it?"

Hsing looked stricken again—frightened. He didn't know what to make of that, either. He went on.

"I've been trying to understand the elements in angelic theory or belief that lead them to deny the importance—the fact—of our origin on one planet and our destination on another. Bliss is a coherent system of thought that makes almost perfect sense in itself and as a belief-system for people living as we live. In fact, that's the problem. Bliss is a self-contained proposition, a closed system. It is a psychic adaptation to our life—ship life—an adaptation to a self-contained system, an unvarying artificial environment providing all necessities at all times. We of the middle generations have no goal except to stay alive and keep the ship running and on course, and to achieve it all we have to do is follow the rules—the Constitution. The Zeroes saw that as an important duty, a high obligation, because they saw it as an element of the whole voyage—the means glorified by the end. But for those who won't see the end, there's not much glory being the means. Self-preservation seems self-centered. The system's not only closed, but stifling. That was Kim Terry's vision—how to glorify the means, the voyage—how to make following the rules an end in itself. As he saw it, our true journey is not only to a material world outside in space, but also to a spiritual world of bliss—which we will attain, by living rightly *here*."

Hsing nodded.

"Over the last decades Patel Inbliss has gradually changed the emphasis of this vision. *Here* is all. There's nothing outside the ship—literally nothing, spiritually nothing. Origin and destination are now metaphors. They have no reality. Journey is the sole reality. The voyage is its own end."

She was still impassive, as if he was telling her nothing she didn't know; but she was alert.

"Patel isn't a theorist. He's an activist. Acting on his vision through his archangels and their disciples. I believe that in the last ten

or fifteen years, angels have been making many of the decisions in Council, and most of the decisions about education."

Again she nodded, but warily.

"The schools teach almost nothing about the original purpose of the interstellar voyage—to study and perhaps settle a planet. The texts and programs still have information about the cosmos—starcharts, stellar types, planet formation, all that stuff we had in Tenth—but I've been talking to teachers and they tell me they skip most of it. The children 'aren't interested,' they 'find these old material-science theories confusing.' You realise that almost all school administrators and about 65 percent of the teachers—90 percent in Quad One—are members of Bliss?"

"So many?"

"At least that many. My impression is that some angels conceal their beliefs, deliberately, to keep their dominance from becoming too plain."

Hsing looked uneasy, disgusted, but said nothing.

"Meanwhile in the archangelic teachings, 'outside' is equated with danger, physical and spiritual—sin, evil—and with death. Nothing else. There is nothing good outside the ship. Inside is positive, outside negative. Pure dualism.—Not many young angels are going into dermatology these days, but there are some older ones who do eva. As soon as they're through the airlocks, they undergo a ritual of purification. Did you know that?"

"No," she said.

"It's called decontamination. An old material-science-theory word with a new meaning. The soul is contaminated by the silent black outside…Well, that aside. Angels are eager to follow the rules, because our life lived well leads us directly to eternal happiness. They are eager for us all to follow the rules. We live in the Vehicle of Bliss. We can't miss bliss. Unless we break the one new rule. The big one: The ship can't stop."

He stopped. Hsing looked angry, as she always did when she was worried, troubled, or scared.

His gradual discovery of the change in the angelic teachings and the extent of angelic control over various councils had alarmed but not frightened him. He had seen it as a problem, a serious problem, that must be addressed. The way to solve it was to bring it out into the open, forcing the angels to explain their policies and making the non-angels aware that Patel Inbliss was trying to change the rules, and exerting clandestine power to do so. When they saw that, they'd react against it. There need be no crisis.

"We've got 43.5 years," he said. "Plenty of time to talk it over. It's a matter of getting things back in proportion. The more radical angels

will have to agree that we *do* have a destination, that people *are* going to do eva there, and that they'll need to be trained to do eva, not to look on it as a sin."

"It's worse than that," Hsing said. The tight, stricken look had come over her again. She jumped up and walked across the room—a neat, severe room, not like the messy nest she used to live in—and stood with her back to him.

"Well, yes," Luis said, unsure what she meant, but encouraged at her saying anything at all. "We all need training. We'll be in our sixties at Arrival. If the planet's habitable, we've got to get used to the idea of at least some of us living there—staying there. While maybe some of us turn around and head back to Dichew…The angels never mention that, by the way. Inbliss seems to think only in a straight line extending to infinity. The flaw in his reasoning is that he assumes a material vehicle is capable of an eternal journey. Entropy does not seem to be part of Bliss."

"Yes," Hsing said.

"That's all," he said after a minute. He was puzzled and worried by her non-response. He waited a little and said, "I think this must be talked about. So I came to you. To talk about it. And you might want to talk about it to non-angelic people in Management and on the Bridge. They need to be concerned about this revision of our mission." He paused. "Maybe they already are."

"Yes," she said again. She had not turned around.

Luis had very little anger in his temperament and was not given to fits of pique, but he felt let down flat. As he looked at Hsing's back, her pink cheongsam, her short-legs-no-butt (so she had described her Chi-An figure), her black hair falling bright and straight and cut off sharp at the shoulder, he also felt pain. A hard, deep, sore pain at the heart.

"There was a flaw in my reasoning too," he said. He stood up.

She turned around. She still looked worried beyond anything he had expected. It had taken him a long time to realise how powerful angelic thinking had become, and he had dumped all his discoveries on her at once—yet none of it had seemed to surprise her. So why this reaction? And why wouldn't she talk about it?

"What flaw?" she asked, but still distrustful, holding back.

"Nothing. I miss talking with you."

"I know. The work in Nav, it seems like it never lets up."

She was looking at him but not looking at him. He couldn't stand it.

"So. That's it. Just sharing my worries, as we say in Peace Session. Thanks for the time."

He was in the doorway when she said, "Luis."

He stopped, but didn't turn.

"I want to talk more about all this maybe with you later."

"Sure. Don't let it worry you."

"I have to talk to Hiroshi about it."

"Sure," he said again, and went out into the corridor.

He wanted to go somewhere else, not corridor 4-4, not any corridor, not any room, not any place he knew. But there was no place he didn't know. No place in the world.

"I want to go out," he said to himself. "Outside."

Silent, black, outside.

On the Bridge

"Tell your friend not to panic," Hiroshi said. "The angels aren't in control. Not as long as we are."

He turned back to his work.

"Hiroshi."

He did not answer.

She stood a while near his seat at the navigators' station. Her gaze was on *Discovery*'s one "window": a meter-square screen on which data from the epidermal sensors was represented in visible light. Blackness. Bright dots, dim dots, haze: the local starfield and, in the left lower corner, a bit of the remote central galactic disk.

Children in the third year of school are brought to see the "window."

Or they used to be.

"Is that actually what's ahead of us?" she had asked Teo not long ago, and he had said, smiling, "No. Some of it's behind us. It's a movie I made. It's where we'd be if we were on schedule. In case somebody noticed."

She stared at it now and remembered Luis's phrase, VU. Virtual Unreality.

Without looking at Hiroshi she began to speak.

"Luis thinks the angels are taking control. You think you're in control. I think the angels are controlling you. You don't dare tell people that we're decades ahead of schedule, because you think that if the archangels knew, they'd take over and change course so as to miss the planet. But if you go on hiding the truth, you're guaranteeing that they'll take over when we reach the planet. What are you planning to say? *Here we are! Surprise!* All the angels will have to say is, *These people are crazy, they made a navigation error and then tried to cover it up. We aren't at Shindychew—it's forty years too soon—this is some other solar system.* So they take over the Bridge and we go on. And on. To

nowhere."

A long time passed, so that she thought he had not listened, had not heard her at all.

"Patel's people are extremely numerous," he said. His voice was low. "As your friend has been discovering…It was not an easy decision, Hsing. We have no strength except in the accomplished fact. Actuality against wishful thinking. We arrive, we come into orbit, and we can say: *There's the planet. It's real. Our job is to land people on it*. But if we tell people now…four years or forty, it doesn't matter. Patel's people will discredit us, replace us, change course, and…as you say…go on to nowhere. To 'bliss.'"

"How can you expect anybody to believe you, to support you, if you've lied to them right up to the last moment? Ordinary people. Not angels. What justifies you in not telling them the truth?"

He shook his head. "You underestimate Patel," he said. "We cannot throw away our one advantage."

"I think you underestimate the people who would support you. Underestimate them to the point of contempt."

"We must keep personalities out of this matter," he said with sudden harshness.

She stared at him. "Personalities?"

The Plenary Council

"Thank you, Chairwoman. My name is Nova Luis. I request the Council discuss formation of an ad hoc Committee on Religious Manipulation, to investigate the educational curriculum, the contents and availability of certain materials in the Records and Archives, and the composition of the fourteen committees and deliberative bodies listed on the screen."

4-Ferris Kim was on his feet at once: "A Committee on Religious Manipulation can be convened, according to the Constitution, only to investigate 'an election or the deliberation of a legislative body.' School curriculum, the materials kept in Records and Archives, and the committees and councils listed cannot be defined as legislative bodies and thus are exempt from examination."

"The Constitutional Committee will decide that point," said Uma, chairing the meeting. Ferris sat down looking satisfied.

Luis stood up again. "Since the religion in question is the creed of Bliss, may I suggest that the Chair consider the Constitutional Committee as possibly biased, since five of the six members profess the creed of Bliss."

Ferris was up again: "Creed? Religion? What kind of

misunderstanding is this? There are no creeds or cults in our world. Such words merely echo ancient history, divisive errors which we have long since left behind on our way." His deep voice grew mellow, gentle. "Do you call the air a 'creed,' Doctor, because you breathe it? Do you call life a 'religion,' because you live it? Bliss is the ground and goal of our existence. Some of us rejoice in that knowledge; for others that joy lies in the future. But there are no religions here, no warring creeds. We are all united in the fellowship of *Discovery*."

"And the goal appointed in our Constitution for *Discovery* and those who travel in it is to travel through a portion of space to a certain planet, to study that planet, to colonise it if possible, and to send or bring back information about it to our world of origin, Dichew, Earth. We are all united in the resolve to accomplish that goal. Do you agree, Councillor Ferris?"

"Surely the Plenary Council is not the place to quibble over linguistic and intellectual theories?" Ferris said with mild deprecation, turning to the Chair.

"An allegation of religious manipulation is more than a quibble, Councillor," Uma said. "I will discuss this matter with my advisory council. It will be on the agenda of the next meeting."

The Soup Thickens

"Well," Bingdi said, "we have certainly put the turd in the soupbowl."

They were running the track. Bingdi had done twenty laps. Luis had done five. He was slowing down and breathing hard. "Soup of bliss," he panted.

Bingdi slowed down. Luis gasped and stopped. He stood awhile and wheezed. "Damn," he said.

They walked to the bench for their towels.

"What did Hsing say when you talked to her?"

"Nothing."

After a while Bingdi said, "You know, that bunch on the Bridge and Uma's advisory council, they're as tight as the archangels. They talk to each other and nobody else. They're a faction, as much as the archangels."

Luis nodded. "Well, so, we're the third faction," he said. "The turd faction. The soup thickens. Ancient history repeats itself."

The Great Rejoicing of Year 161, Day 88

Two days after the Plenary Council announced the formation of a Committee on Religious Manipulation to investigate ideological bias in educational curricula and the suppression and destruction of information in the Records and Archives, Patel Inbliss called for a Great Rejoicing.

The Temenos was packed. Everybody said, “It must have been like this when 0-Kim died.”

The old man stood up at the lectern. His face, dark, unwrinkled, the bones showing through the fragile skin, loomed on every screen in every homespace. He raised his arms in blessing.

The great crowd sighed, a sound like wind in a forest, but they did not know that; they had never heard the sound of wind in a forest; they had never heard any sigh, any voice but their own and the voices of machines.

He talked for nearly an hour. At first he spoke of the importance of learning and following the laws of life laid down in the Constitution and taught in the schools. He asserted with passion that only scrupulous observance of these rules could assure justice, peace, and happiness to all. He talked about cleanliness, about recycling, about parenthood, about athletics, about teachers and teaching, about specialized studies, about the importance of unglamorous professions such as labwork, soilwork, infant care. Speaking of the happiness to be found in what he called “the modest life,” he looked younger; his dark eyes shone. “Bliss is to be found everywhere,” he said.

That became his theme: the ship called “discovery,” the ship of life, that travels across the void of death: the vehicle of bliss.

Within the ship, rules and laws and ways are provided by which each mortal being may, by learning to live in mortal harmony and happiness, learn also the way to the True Destination.

“There is no death,” the old man said, and again that sigh ran through the forest of lives crowded in the round hall. “Death is nothing. Death is null, death is void. Life is all. Mortal life voyages onward, ever onward, straight and true on its course to everlasting life, and light, and joy. Our origin was in darkness, in pain, in suffering. On that black ground of evil, in that terrible place, our ancestors in their wisdom saw where true life, true freedom was. And they sent us, their children, forth, free of darkness, earth, gravity, negativity, to travel forever into the light.”

He blessed them again, and some thought his sermon was done, but as if given new energy by his words he was speaking on: “Do not mistake the goal of our discovery, the purpose of our lives! Do not mistake symbol and metaphor for reality! Our ancestors did not send us on this great voyage only to return to where it began. They did not free us from gravity only to sink again into gravity. They did not free

us from Earth to doom us to another earth! That is literalism—scientific fundamentalism—a dreadful mental myopia. Our origin was on a planet, in darkness and misery, yes, but that is not our destination! How could it be?

"Our ancestors spoke of the Destination as a world, because they knew nothing else. They had lived only in darkness, in filth, in fear, dragged down by gravity. When they tried to imagine bliss, they could only imagine a better, brighter world, and so they called it a 'new earth.' But we can see the meaning of that obscure symbol, and translate it into truth: not a planet, a world, a place of darkness, fear, pain, and death—but the bright journey of mortal life into endless life, the unceasing, everlasting pilgrimage into unceasing, everlasting bliss. O my fellow angels! our voyage is sacred, and it is eternal!"

"Ahh," sighed the forest leaves.

"Ah!" said Luis, watching and listening in his homespace with Bingdi and several friends, known among themselves as the Turd Group.

"Hah!" said Hiroshi, watching and listening in his homespace with Hsing.

On the Bridge, Year 161, Day 101

"Diamant asked me yesterday about an anomaly he noticed in the acceleration figures. He's been following up on it for a couple of tendays."

"Lead him astray," Hiroshi said, comparing two sets of figures.

"I will not."

After some minutes he said, "What will you do?"

"Nothing."

His hands were flickering over the workboard. "Leaving it to me."

"If you choose."

"I have no choice."

He worked on. Hsing worked on.

She stopped working and said, "When I was about ten I had a terrible dream. I dreamed I was in one of the cargo bays, wandering around, and I realised that there was a little hole in the wall, in the skin of the ship. A hole in the world. It was very small. Nothing was happening, but I knew what had to happen was that all the air would rush out the hole, because outside was vacuum. The nothing outside the ship. So I put my hand over the hole. My hand covered it. But if I took my hand away, I knew the air would begin to rush out. I called and called, but nobody was near. Nobody heard. And finally I thought I had to go get help, and tried to take my hand off the hole, but I

couldn't. It was held there. By the nothing outside."

"A terrible dream," Hiroshi said. As she spoke he had turned from the workboard and sat facing her with his hands on his knees, straight-backed, expressionless. "Do you recall it because you feel yourself in a similar position now?"

"No. I see you in that position."

He considered this awhile. "And do you see a way out of that position?"

"Shout for help."

He shook his head very slightly.

"Hiroshi, one or another of the students or the engineers is going to find out what you've been doing and talk about it before you can mislead, or co-opt, or silence them. In fact, I think it's already happening. Diamant's been going after this as if he's trying to prove something. He's very bright and extremely anti-authoritarian—I was in classes with him. He will not be easy to mislead or co-opt."

He made no reply.

"As I was," she added, dryly but without rancor.

"What do you mean by 'shout for help'?"

"Tell him the truth."

"Only him?"

She shook her head. She said in a low voice, "Tell the truth."

"Hsing," he said, "I know you think our tactics are mistaken. I'm grateful to you for bringing up your disagreement so seldom, and only with me. I wish we could agree on what is right. But I cannot put the power to change our course into the hands of the cultists until it is literally too late for them to do so."

"It's not your decision to make."

"Will you take it out of my hands?"

"Someone will. And when they do, it will appear that you've been lying for years, you and your friends, in order to have sole power. How else can they see it? You will be dishonored." Her voice still sounded low and rough. After a moment, biting her lip, she added, "Your question to me just now was dishonorable."

"It was rhetorical," he said.

There was another long silence.

He said, "It was dishonorable. I beg your pardon, Hsing."

She nodded. She sat looking down at her hands.

"What action do you recommend?" he asked.

"Talk to Tan Bingdi, Nova Luis, Gupta Lena—the group that's behind the ad hoc committee. They're working to expose Patel's power-tactics. Tell them whatever you like about how it happened, but tell them that we're going to be at the Destination in three years—unless Patel prevents it."

"Or Diamant," he said.

She winced. She spoke more cautiously, more patiently: "The danger isn't people like Diamant, Hiroshi. It's a fanatic gaining access to the Bridge for two minutes to damage, disable the course-computers—that's always been a possibility, but now there's a *reason* for somebody to do it. Now they *want* us never to arrive. At least that's out in the open, since Patel's speech. So now the fact that we *are* arriving has to come out in the open, because we need all the support we can get to make it happen. We must have support. You can't go on alone with your hand over the hole in the world!"

She had felt him withdraw when she said the name Nova Luis. She grew more urgent and eloquent as she spoke, losing ground; she ended up pleading. She waited and he made no response. Her arguments and urgency ebbed away slowly into a dry flatness of nonfeeling.

At last she said, drily and flatly, "Or perhaps you can. But I can't go on lying to colleagues and friends. I won't give you away, but I won't collude any more. I will say nothing at all to anyone."

"Not a very practical plan," he said, looking up at her with a stiff smile. "Be patient, Hsing. That's all I ask."

She stood up. "The evil of this is that we don't trust each other."

"I trust you."

"You don't. Me, or my silence, or my friends. The lie sucks trust out. Into nothing."

Again he did not speak; and presently she turned and left the Bridge. After she had walked a while she realised that she was at Quad Two, at Turning 2-3, heading for her old homespace, where her father lived alone. She wanted to see Yao, but felt it would be somehow disloyal to Hiroshi to go see him now. She turned around and started back to the Canaval-Liu homespace in Quad Four. The corridors seemed tight and narrow, crowded. She spoke to people who spoke to her. She remembered a part of her old nightmare dream that she had not thought to tell Hiroshi. The hole in the wall of the world had not been made by something from outside, a bit of dust or rock; when she saw it she knew, as one knows in a dream, that it had been there ever since the ship was made.

An Announcement of Extraordinary Importance, Year 161, Day 202

The Chair of the Plenary Council put a notice on the innet of an "announcement of extraordinary importance" to be made at twenty hours. The last such announcement had been made over fifteen years ago to explain the necessity of an alteration in profession quotas.

People gathered in the homespace or compound or meetingspace or workplace to hear. The Plenary Council held session.

Chatterji Uma came on the screen precisely at twenty and said, “Dear fellow passengers of the ship *Discovery*, we must prepare ourselves for a great change. From this night forward, our lives will be different—will be transformed.” She smiled; her smile was charming. “Do not be apprehensive. This is a matter for rejoicing. The great goal of our voyage, the destination for which this ship and its crew were intended from the very beginning of our voyage, is closer than we dreamed. Not our children, but we ourselves, may be the ones to set foot upon a new world. Now Canaval Hiroshi, our Chief Navigator, will tell you the great discovery he and others on the Bridge have made, and what it means, and what we may expect.”

Hiroshi replaced Uma on the screens. The thickness and blackness of his eyebrows gave him a sometimes threatening, sometimes questioning look. His voice however was reassuring, quiet, positive, and rather pedantic. He began by telling them what had happened five years ago as the ship passed through a gravity sink near a very large area of cosmic dust.

Hsing, watching him alone in their livingspace, could tell when he began to lie, not only because she knew the actual figures and dates but because when he began lying he became both more authoritative and more persuasive. The lies concerned the rates of acceleration and deceleration, the time of the discovery of the computer error, and the navigators’ response.

Without being specific about dates, Hiroshi implied that the first suspicions of anomalies in the ship’s rate of acceleration had arisen less than a year ago. The magnitude of the computer error and its implications had been only gradually revealed. He sketched a scenario of incredulous but intrepid humans wresting their secrets from computers whose programming forced them to resist any override of their response to the original misreading, of navigators forced to try to outwit their instruments, trick them into re-compensating for their immense overcompensation, slowing the ship down from the incredible speed it had achieved.

Until this moment, he said, that struggle had been so chancy, they had been so unsure of what had happened and was happening, that they had felt it unwise to make any announcement. “To avoid causing panic by a premature or incorrect disclosure was our chief concern. We know now that there is no cause for alarm. None. Our operations were entirely successful. Just as the acceleration exceeded all speculative limits, we have been able to decelerate very much more quickly than had been thought possible. We are on course and in control. The only change is that we are well ahead of schedule.”

He looked up, as if looking out of the screen, his black eyes unreadable. He was speaking slowly, carefully, a little monotonously, letting each sentence stand by itself. “We are continuing to decelerate, and will do so for the next 3.2 years.

“Late in the year 164, we will enter orbit around the planet of destination, Hsin Ti Chiu or New Earth.

“That event, as we all know, was scheduled to occur in the year 201. Our voyage of discovery has been shortened by nearly forty years.

“Ours is a fortunate generation. We will see the end of our long voyage. We will reach its goal.

“We have much work to do in these two years. We must prepare our minds and bodies to leave our little world and walk upon a wide new earth. We must prepare our eyes and souls for the light of a new sun.”

The True Way

“It doesn’t make sense, Luis,” Rosa said. “It doesn’t mean anything. The Zeroes just didn’t understand. How could they? They thought we were too sinful to be able to live in heaven forever. They were earthen, they couldn’t help it, so they thought we’d have to be earthen too. But we aren’t—how could we be, born here, on the way? Why would we want to live any life other than this one? They made it perfect. They sent us to heaven. They made the world for us so we could learn the way to everlasting life in bliss by living in mortal bliss. How could we learn it on some kind of earthen black world? Outside, unprotected, unguided? How can we keep going on the True Way if we *leave* the True Way? How can we reach heaven by stopping on an earth?”

“Well, maybe we can’t, but we do have a job to do,” Luis said. “They sent us to learn about that earth. And to tell them what we learn. Learning was important to them. Discovery. They named our ship *Discovery*.”

“Exactly! The discovery of bliss! Learning the True Way! The archangels are sending back what we’ve learned all the time, you know, Luis. We’re teaching them the way—just as they hoped we would. The goal is a spiritual goal. Don’t you see, we’ve *attained* the Destination? Why do we have to stop our beautiful voyage at some evil, terrible, earthen place and do eva?”

An Election, Year 162, Day 112

5-Nova Luis was elected Chair of the Plenary Council. The general trust he had earned as a conciliator, negotiator, and peacemaker during the troubles of the past half-year made his election inevitable, and popular even among the angels. His year in office was indeed one of reconciliation and healing.

A Death, Year 162, Day 205

At the age of eighty-seven, 4-Patel Inbliss suffered a massive stroke and began to die, amid a continuous frenzy of tearful prayer, song, and rejoicing. For thirteen days the celebrants occupied all the corridors surrounding the Kim homespace in Quadrant One, where Inbliss was born and had lived all his life. As his dying went on and on, weariness and tension grew among the mourner-rejoicers. People feared an outbreak of hysteria and violence like that which had followed the announcement of Arrival. Many non-angel occupants of the quadrant went to stay with friends or relatives in other quads.

When at last an archangel announced that the Father had passed to Eternal Bliss, there was much weeping in the corridors, but no violence, except for a man in Quad Four named 5-Garr Joyful who beat his wife and her daughter to death "so that they could enter Eternal Bliss with the Father," he said; he omitted, however, to kill himself.

The Temenos was filled solid for the funeral of Patel Inbliss. There were many speeches, but their tone was subdued. He had no child to deliver the final speech. The archangel Van Wing sang the dark devotional, "Eye, what do you see?" to end the ceremony. The crowd dispersed in the silence of exhaustion. The corridors that night were empty.

A Birth, Year 162, Day 223

5-Canaval Hiroshi's child was born to his wife 5-Liu Hsing, and was given the name 6-Canaval Alejo by his father.

Though Nova Luis was not practicing medicine during his term as council chair, Hsing had asked him to attend the birth, and he did so. It was an entirely uneventful delivery.

When he came the next day to see his patients, he sat for a while with them. Hiroshi was on the Bridge. Hsing's milk had not come in yet, but the baby was rooting diligently at her breast or anything else that offered itself. "What did you want me for?" Luis said. "You obviously know how to have a baby a lot better than I do."

"I guess I found out," she said. "*Learn by doing!*—remember Teacher Mimi in third grade?" She was sitting up in bed, still looking tired, triumphant, flushed, and soft. She looked down at the small head covered with very fine black hair. "It's so tiny, I can't believe it's the same species," she said. "What do you call this stuff I'm leaking?"

"Colostrum. It's the only thing his species eats."

"Amazing," she said, very softly touching the black fuzz with the back of a finger.

"Amazing," Luis agreed soberly.

"Oh Luis, it was so—To have you here. I did need you."

"It was my pleasure," he said, still soberly.

The baby went through some spasms, and was discovered to have had a miniature bowel movement. "Well done, well done. He'll be a member of the Turd Group yet," Luis said. "Give him here, I'll clean him up. Well, will you look at that? A bobwob! A veritable bobwob! A fine specimen, too."

"It's a gowbondo," Hsing whispered. He looked up at her and saw she was in tears.

He laid the baby, swallowed up by its clean diaper, in her arms; she went on crying. "I'm sorry," she said.

"New mothers cry, flatface."

She wept very bitterly for a moment, gasping, then got control.

"Luis, what is—have you noticed anything about Hiroshi—"

"As a doctor?"

"Yes."

"Yes."

"What's wrong with him?"

He said nothing for a while, then, "He won't go to a physician, so you're asking me for a spot diagnosis—is that it?"

"I guess so. I'm sorry."

"It's all right. Has he been particularly tired?"

She nodded. "He fainted twice last week," she said in a whisper.

"Well, my guess would be congestive heart failure. I know a good deal about it because as an asthmatic I'm liable to it myself, though I haven't managed to achieve it yet. You can live with it for a long time. There are medicines he can take, various treatments and regimes. Send him to Regis Chandra at the Hospital."

"I'll try," she whispered.

"Do it." Luis spoke sternly. "Tell him that he owes his son a father."

He stood up to leave. Hsing said, "Luis—"

"Take it easy, don't worry. It'll be all right. This fellow will see to it." He touched the baby's ear.

"Luis, when we land, will you go outside?"

"Of course I will, if we can. What do you think I'm insisting on all this education and training for? To watch a bunch of evajocks running around in space suits on a vidscreen?"

"It seems like so many people want to stay here."

"Well, we'll find out when we get there. It's going to be interesting. It already is interesting. We found out what a whole section in Storage D is. We thought it was very heavy protective clothing, but the pieces were too large. It's temporary livingspaces. You prop them up somehow and live inside them. And there are inflatable toruses which Bose thinks are meant to float on water. *Ships*. Imagine enough water to float a ship on! No. I wouldn't miss it for the world…I'll look in tomorrow."

The Registry of Intent upon Arrival

In the first quarter of Year 163, all people over sixteen were required to declare Intent Upon Arrival in an open registry on the innet. They could change their declaration any time, and it would not be binding upon them until a moment of ultimate decision, to be announced after investigations of the habitability of the planet were complete and had been fully tested.

They were asked:

If the planet proved habitable, would you be willing to be part of a team visiting the surface to gather information?

Would you be willing to live on the planet while the ship remained in orbit?

If the ship left, would you be willing to stay on the planet as colonists?

They were asked to state their opinion:

How long should the ship stay in orbit as a support to the people on the planet?

And finally, if the planet was not accessible or not habitable, or if you chose to stay on the ship and not visit or colonise the planet:

If and when the ship left, should it return to the planet of origin, or continue on into space?

A return journey to Earth, according to Canaval and others, might take as little as seventy-five years if the whiplash effect of the gravity sink could be repeated. Some engineers were skeptical, but the navigators were confident that *Discovery* could return to Earth within a lifetime or two. This assertion met with little enthusiasm except among the navigators.

The open registry of Intent Upon Arrival, accessible on the innet at all times, went through interesting fluctuations. At first the number

of people willing to visit the planet or live on it while the ship stayed in orbit—Visitors, they were dubbed—was pretty large. Very few, however, said they would be willing to stay there when the ship left. These diehards got tagged Outsiders, and accepted the name.

The largest figure by far was those who wished not to land on the planet at all, and to continue the voyage out as soon as possible. Over two thousand people registered immediately as Voyagers.

This angelic vote was so strong that there was no real question of what the final decision would be. *Discovery* would not stay in orbit around its Destination, would not turn back to its Origin, but would go on to Eternity.

Urgent arguments about exhaustibility of supplies, about wear and tear, about accident and entropy, swayed some Voyagers; but the majority continued steadfast in their intention to live in bliss and die to Bliss.

As this became clear, the number of people who registered as willing to stay permanently on the planet began to grow, and kept growing. It was clear that the angelic majority, eager to continue its sacred journey, could not be kept tethered to the planet for very long. Few of the angels opted even to make an exploratory visit to the planet's surface. Many, following the teachings of the archangels, tried to persuade their friends that leaving the ship was unthinkably dangerous—not a bodily risk, but a sin, a temptation to seek unneeded knowledge at the cost of the immortal soul.

Gradually the choices narrowed, became absolute. Go out into the dark and be left there, or continue on the bright and endless voyage. The unknown, or the known. Risk, or safety. Exile, or home.

Throughout the year, the number of those who shifted their registry from Visitor to Outsider grew to over a thousand.

In the latter half of Year 163, the yellow star that was the primary of Shindychew's system appeared to the eye at magnitude -2. Schoolchildren were taken onto the Bridge to see it in the "window."

The education curriculum had been radically revised. Though teachers who were angels were unenthusiastic or hostile to the new material, they were required to allow "lay teachers" to present information about what the Destination might be like. The VRs of Old Earth—Jungle, Inner City, and so on—had allegedly deteriorated, and had been destroyed; but many educational films were salvaged, and others were found in Storage awaiting use by potential settlers.

Those who registered as Visitors or Outsiders formed learning groups, in which they studied and discussed these films and instructional books. Dictionaries were much called upon to settle misunderstandings and arguments over terms, though sometimes the arguments went on and on. Was a *ravine* a need for food, or a place

where the floor went down into a hole? The dictionary offered gorge, gully, gulch, canyon, chasm, rift, abyss…A low place in the floor, then. When you need food badly, that's *ravenous*. But why would you need food badly?

A Pragmatist

"No. I don't intend to leave the ship."

Luis stared at the Registry, where he had just discovered Tan Bingdi's name on the list of Voyagers. He looked around at his friend, and at the screen again.

"You don't?"

"I never did. Why?"

"You aren't an angel," Luis said at last, stupidly.

"Of course not. I'm a pragmatist."

"But you've worked so hard to keep the…the way out open…"

"Of course." After a minute he explained: "I don't like quarrels, divisions, enforced choices. They spoil the quality of life."

"You aren't curious?"

"No. If I want to know what living on a planet surface is like, I can watch the training videos and holos. And read all the books in the Library about Old Earth. But why do I want to know what living on a planet is like? I live here. And I like it. I like what I know and I know what I like."

Luis continued to look appalled.

"You have a sense of duty," Bingdi told him affectionately. "Ancestral duty—go find a new world…Scientific duty—go find new knowledge…If a door opens, you feel it's your duty to go through it. If a door opens, I unquestioningly close it. If life is good, I don't seek to change it. Life is good, Luis." He spoke, as always, with little rests between the sentences. "I will miss you and a lot of other people. I'll get bored with the angels. You won't be bored, down on that dirtball. But I have no sense of duty and I rather enjoy being bored. I want to live my life in peace, doing no harm and receiving no harm. And, judging by the films and books, I think this may be the best place, in all the universe, to live such a life."

"It's a matter of control, finally, isn't it," Luis said.

Bingdi nodded. "We need to be in control. The angels and I. You don't."

"We aren't in control. None of us. Ever."

"I know. But we've got a good imitation of it, here. VR's enough for me."

A Death, Year 163, Day 202

After recurrent episodes of illness, Navigator Canaval Hiroshi died of heart failure. His wife Liu Hsing with their infant son, and many friends, all the staff of Navigation, and most of the Plenary Council, attended the funeral service. His colleague 4-Patel Ramdas spoke of his brilliance in his profession, and wept as he finished speaking. 5-Chatterji Uma spoke of how he laughed at silly jokes, and told one he had laughed at; she said how happy he had been to have a son, though he had known him so briefly. One of his students spoke last, in the place of the child, calling him a hard master but a great man. Hsing then went with the technicians, accompanying his body to the Life Center for recycling. She had not spoken at the service. The technicians left her alone for a moment, and she laid her hand very gently on Hiroshi's cheek, feeling the death-cold. She whispered only, "Goodbye."

Destination

In the year 164, Day 82, *Discovery* entered orbit around the planet Shindychew, Hsin Ti Chiu, or New Earth.

As the ship made its first forty orbits, probes sent down to the surface of the planet provided vast amounts of information, much of which was unintelligible or barely intelligible to those receiving it on the ship.

They were soon able to state with certainty, however, that people would be able to do eva on the surface without respirators or suits. There was a growing body of evidence that the planet might be accessible to long-range inhabitation. That people could live there.

In the year 164, Day 93, the first ship-to-ground vehicle made a successful landing in the area designated Subquadrant Eight of the planetary surface.

After this there are no more headings, for the world is changed, names change, time is not measured as it was, and the wind blows everything away.

To leave the ship: to go through the airlock into the lander, that was a comprehensible thing—terrifying, fiercely exciting, absolute, an act of transgression, of defiance, of affirmation. The last act.

To leave the lander: to go down those five steps onto the surface of the planet, that was to leave comprehension behind, to lose

understanding: to go mad. To be translated into a language where no word—ground, air—transgress, affirm—act, do—made sense. A world without words. Without meaning. A universe undefined.

Immediately perceiving the wall, the blessed needed only wall, the side of the lander, she backed up against it and at once turned to hide her face against it so that she could see it, the wall, curving metal, firm, limiting, see it and not see the other, the no walls, the vast.

She held her baby close against her, his face to her breast.

People were there with her, beside her, clinging to the wall, but she was only vaguely aware of them, even though they were all huddled close together they all seemed apart and distant. She heard people gasping, vomiting. She was dizzy and sick. She could not breathe. The ventilation was failing, the fans were far too strong. Turn down the fans! A spotlight shone down on her, she could feel the heat of it on her head and neck, see the glare of it in the skin of the wall when she opened her eyes.

The skin of the wall, the ship's epidermis. She was doing eva. That was all. She always wanted to be an evaman when she was little. She was doing eva. When it was done she could go back into the world. She tried to hold on to the skin of the world but it was smooth ceramic and would not let her hold it. Cold mother, hard mother, dead mother.

She opened her eyes again and looked down past Alejo's silky black head at her feet and saw her feet standing in dirt. She moved, then, to get out of the dirt, because you shouldn't walk in dirt. Father had told her when she was very young, no, it's not good to walk in the dirt gardens, the plants need all the room, and your feet might hurt the little plants. So she moved away from the wall to move out of the dirt garden. But there was only dirt garden, dirt, plants, everywhere, wherever she put her feet. Her feet hurt the plants and the dirt hurt the soles of her feet. She looked despairingly for a walkway, a corridor, a ceiling, walls, looked away from the wall and saw a great whirl of green and blue spin round a center of intolerable light. Blinded and unbalanced she fell to her knees and hid her face beside the baby's face. She wept in shame.

Wind, air moving fast, hard, endlessly blowing, making you cold, so you shivered, shuddered, like having a fever, the wind stopping and starting, restless, stupid, unpredictable, unreasonable, maddening, hateful, a torment. Turn it off, make it stop!

Wind, air moving softly, moving slender grasses in waves over the hills, carrying odors from a long way off, so you lifted your head and sniffed, breathed it in, the strange, sweet, bitter smell of the world.

The sound of wind in a forest.
Wind that moved colors in the air.

People who had never been of much account became prominent, respected, constantly in demand. 4-Nova Ed was good with the tenses. He was the first to figure out how to deploy them properly. Miraculously the shambles of plasticloth and cords rose and became walls, walls to shut out the wind—became rooms, rooms to enclose you in the marvelous familiarity of surfaces close by, a ceiling close overhead, a floor smooth underfoot, quiet air, an even, unblinding light. It made all the difference, it made life livable, to have a tense, to have a homespace, to know you could go in, be in, be inside.

"It's 'tent,'" Ed said, but people had heard the more familiar word and went on calling them tense, tenses.

A fifteen-year-old girl, Lee Meili, remembered from an ancient movie what foot coverings were called. People had tried syndrome-sox, those that had them, but they were thin and wore out at once. She hunted through the Stockpile, the immense and growing labyrinth of stores that the landers kept bringing down from the ship, till she found crates labelled SHOES. The shoes hurt the delicate-skinned feet of people who had gone barefoot on carpet all their lives, but they hurt less than the floor here did. The *ground*. The *stones*. The *rocks*.

But 4-Patel Ramdas, whose skills had put *Discovery* into orbit and guided the first lander from ship to surface, stood with a reading lamp in one hand, its cord and plug in the other, staring at the dark wrinkled wall-like surface of a huge plant, the *tree* under which he had set up his tense. He was looking for an electrical outlet. His gaze was vague and sad. Presently he straightened up; his expression became scornful. He walked back to the Stockpile with the lamp.

5-Lung Tirza's three-month-old baby lay in the starlight while Tirza worked on construction. When she came to feed him she shrieked, "He's blind!" The pupils of his eyes were tiny dots. He was red with fever. His face and scalp blistered. He had convulsions, went into coma. He died that night. They had to recycle him in the dirt. Tirza lay on the place in the dirt where the baby was lying inside it, underneath her. She moaned with her mouth against the dirt. Moaning aloud, she raised her face with brown wet dirt all over it, a terrible face made of dirt.

Not star: sun. Starlight we know: safe, kind, distant. Sun is a star too close. This one.

My name is Star, Hsing said in her mind. Star, not Sun.

She made herself look out of her tense in darkcycle to see the safe, kind, distant stars who had given her her name. Shining stars,

bing hsing. Tiny bright dots. Many, many, many. Not one. But each… Her thoughts would not hold. She was so tired. The immensity of the sky, the uncountability of the stars. She crawled back into inside. Inside the tense, inside the bagbed beside Luis. He lay in the moveless sleep of exhaustion. She listened automatically to his breathing for a moment; soft, unlabored. She drew Alejo into her arms, against her breasts. She thought of Tirza's baby inside the dirt. Inside the dirtball.

She thought of Alejo running across the grass the way he had today, running in the sunlight, shouting for the joy of running. She had hurried to call him back into the shade. But he loved the warmth of sunlight.

Luis had left his asthma on the ship, he said, but his migraines were bad sometimes. Many people had headaches, sinus pain. Possibly it was caused by particles in the air, particles of dirt, plants' pollens, substances and secretions of the planet, its outbreath. He lay in his tense in the long heat of the day, in the long ebb of the pain, thinking about the secrets of the planet, imagining the planet breathing out and himself breathing in that outbreath, like a lover, like breathing in Hsing's breath. Taking it in, drinking it in. Becoming it.

Up here on the hillside, looking down on the *river* but not close to it, had seemed a good place for the *settlement*, a safe distance, so that children would not be falling into the huge, fiercely rushing, deep mass of water. Ramdas measured the distance and said it was 1.7 kilos. People who carried water discovered a different definition of distance: 1.7 kilos was a long distance to carry water. Water had to be carried. There were no pipes in the ground, no faucets in the rocks. And when there were no pipes and faucets you discovered that water was necessary, constantly, imperatively necessary. Was wonderful, worshipful, a blessing, a bliss the angels had never dreamed of. You discovered thirst. To drink when you were thirsty! And to wash—to be clean! To be as you'd always been, not grainy-skinned and gritty and sticky with smears of dirt, but clean!

Hsing walked back from the fields with her father. Yao walked a little stooped. His hands were blackened, cracked, ingrained with dirt. She remembered how when he worked in the dirt gardens of the ship that fine soft dirt had clung to his fingers, lined his knuckles and fingernails, just while he was working; then he washed his hands and they were clean.

To be able to wash when you were dirty, to have enough to drink all the time, what a wonderful thing. At Meeting they voted to move the tenses closer to the river, farther from the Stockpile. Water was more important than things. The children must learn to be careful.

Everybody must learn to be careful, everywhere, all the time.

Strain the water, boil the water. What a bother. But the doctors with their cultures were unyielding. Some of the native bacteria flourished in media made with human secretions. Infection was possible.

Dig latrines, dig cesspools, what hard work, what a bother. But the doctors with their manuals were unyielding. The manual on cesspools and septic tanks (printed in English in New Delhi two centuries ago) was hard to understand, full of words that had to be figured out by context: drainage, gravel, bedrock, seep.

A bother, being careful, taking care, taking trouble, following the rules. Never! Always! Remember! Don't! Don't forget! Or else!

Or else what?

You died anyway. This world hated you. It hated foreign bodies.

Three babies now, an adolescent, two adults. All under the dirt in that place, close to the little first death, Tirza's baby, their guide to the underground. To the inside.

There was plenty to eat. When you looked at the food section of the Stockpile, the huge walls and corridors of crates, it seemed it must be all the food a thousand people could eat forever, and the angels' generosity in letting them have it all seemed overwhelming. Then you saw the way the land went on and on, past the Stockpile, past the new sheds, and the sky went on and on over them; and when you looked back the pile of crates looked very small.

You listened to Liu Yao saying in meeting, "We must continue to test the native plants for edibility," and Chowdry Arvind saying, "We should be making gardens now, while the time of the revolu—of the year is the most advantageous time—the *growing season*."

You came to see that there was not plenty to eat. That there might not ever be plenty to eat. That (the beans did not flower, the rice did not come up out of the dirt, the genetic experiment did not succeed) there might not be enough to eat. In time. Time was not the same here.

Here, to every thing there was a season.

5-Nova Luis, a doctor, sat beside the body of 5-Chang Berto, a soil technician, who had died of blood poisoning from a blister on his heel. The doctor suddenly shouted at Berto's tense-mates, "He neglected it! You neglected him! You could see that it was infected! How could you let this happen? Do you think we're in a sterile environment? Don't you listen? Can't you understand that the dirt here is *dangerous*? Do you think I can work miracles?" Then he began to cry, and Berto's tense-mates all stood there with their dead companion and the

weeping doctor, dumb with fear and shame and sorrow.

Creatures. There were creatures everywhere. This world was made of creatures. The only things not alive were the rocks. Everything else was alive with creatures.

Plants covered the dirt, filled the waters, endless variety and number of plants (4-Liu Yao working in the makeshift plant test lab felt sometimes through the mist of exhaustion an incredulous delight, a sense of endless wealth, a desire to shout aloud—*Look! Look at this! How extraordinary!*)—and of animals, endless variety and number of animals (4-Steinman Jael, one of the first to sign up as an Outsider, had to go back permanently to the ship, driven into fits of shuddering and screaming by the continual sight and touch of the innumerable tiny crawling and flying creatures on the ground and in the air, and her uncontrollable fear of seeing them and being touched by them).

People were inclined at first to call the creatures cows, dogs, lions, remembering words from Earth books and holos. Those who read the manuals insisted that all the Shindychew creatures were much smaller than cows, dogs, lions, and were far more like what they called insects, arachnids, and worms on Dichew. "Nobody here has invented the backbone," said young Garcia Anita, who was fascinated by the creatures, and studied the Earth Biology archives whenever her work as an electrical engineer left her time to do so. "At least nobody in this part of the world. But they certainly have invented wonderful shells."

The creatures about a millimeter long with green wings that followed people about persistently and liked to walk on your skin, tickling slightly, got called dogs. They acted friendly, and dogs were supposed to be man's best friend. Anita said they liked the salt in human sweat, and weren't intelligent enough to be friendly, but people went on calling them dogs. Ach! what's that on my neck? Oh, it's just a dog.

The planet revolved around the star.

But at evening, the sun set. The same thing, but a different matter. With it as it set the sun took colors, colors of clouds moved through air by wind.

At daybreak the sun rose, bringing with it all the mutable, fierce, subtle colors of the world, restored, brought back to life, reborn.

Continuity here did not depend on human beings. Though they might depend on it. It was a different matter.

The ship had gone on. It was gone.

Outsiders who had changed their minds about living outside had

mostly gone back up in the first few tendays. When the Plenary Council, now chaired by the Archangel 5-Ross Minh, announced that *Discovery* would leave orbit on Day 256, Year 164, a number of people in the Settlement asked to be taken back to the ship, unable to endure the finality of permanent exile, or the painful realities of life outside. About as many shipsiders asked to join the Settlement, unable to accept the futility of an endless pilgrimage, or the government of the archangels.

When the ship left, the nine hundred and four people on the planet had chosen to be there. To die there. Some of them had already died there.

They talked about it very little. There wasn't a lot to say, and when you were tired all the time all you wanted was to eat and get into your bedbag and sleep. It had seemed like a big event, the ship going on, but it wasn't. They couldn't see it from the ground anyway. For days and days before the leaving date the radios and the hooknet carried a lot of talk about the journey into bliss, and exhortations telling the people on the ground that they were still all angels and were welcome back to joy. Then there was a flurry of personal messages, pleadings, blessings, goodbyes, and then the ship was gone.

For a long time *Discovery* kept sending news and messages to the Settlement, births, deaths, sermons, prayers, and reports of the unanimous joyfulness of the voyage. Personal messages went back to the ship from the Settlement, along with the same informational and scientific reports that were sent to Earth. Attempts at dialogue, at response, rarely successful, were mostly abandoned after a few years.

Obeying the mandates of the Constitution, the Settlers collected and organised the information they gathered concerning Shindychew and sent it to the planet of origin as often as the work of survival allowed them time to do so. A committee worked on keeping and transmitting methodical annals of the Settlement. People also sent observations and thoughts, images, poems.

You couldn't help wondering if anyone would listen to them. But that was nothing new.

Transmissions intended for the ship continued to come in to the receivers in the Settlement, since the people on Dichew wouldn't hear about the early arrival for years to come, and then their response would take years to arrive. The transmissions continued to be as confusing as ever, almost entirely irrelevant, and increasingly difficult to understand, due to changes in thought and vocabulary. What was a withheld E.O. and why had there been riots about it in Milak? What was faring technology? Why were they saying that it was essential to know about the 4:10 ratio in pankogenes?

The vocabulary problem was nothing new, either. All your life

inside the ship you had known words that had no meaning at all. Words that signified nothing in the world. Words such as *cloud, wind, rain, weather*. Poets' words, explained in notes at the foot of the page, or that found a brief visual equivalent in films, sometimes a brief sensory equivalent in VRs. Words whose reality was imaginary, or virtual.

But here, the word that had no meaning, the concept without content, was the word virtual. Here nothing was virtual.

Clouds came over from the west. West, another reality: direction: a crucially important reality in a world you could get lost in.

Rain fell out of a certain kind of cloud, and the rain wet you, you were wet, the wind blew and you were cold, and it went on and didn't stop because it wasn't a program, it was the weather. It went on being. But you didn't, unless you acquired the sense to come in out of the rain.

Probably people on Earth already knew that.

The big, thick, tall plants, the trees, consisted largely of the very rare and precious substance wood, the material of certain instruments and ornaments ontheship. (One word: ontheship.) Wood objects had seldom been recycled, because they were irreplaceable; plastic copies were quite different in quality. Here plastic was rare and precious, but wood stood around all over the *hills* and *valleys*. With peculiar, ancient tools provided in the Landing Stock, fallen trees could be cut into pieces. (The meaning of the word *chensa*, spelled *chainsaw* in the manuals, was rediscovered.) All the pieces of tree were solid wood: an excellent material for building with, which could also be shaped into all kinds of useful devices. And wood could be set fire to, to create warmth.

This discovery of enormous importance, would it be news on Earth?

Fire. The stuff at the end of a welding torch. The active point in a bunsenburner.

Most people had never seen a fire burning. They gathered to it. Don't touch! But the air was cold now, full of cloud and wind, full of weather. Fire-warmth felt good. Lung Jo, who had set up the Settlement's first generator, gathered bits of tree and piled them inside his tense and set fire to them and invited his buddies to come get warm. Presently everybody poured out of the tense coughing and choking, which was fortunate, because the fire liked the tense as well as it liked the wood, and ate with its red and yellow tongues till nothing was left but a black stinking mess in the rain. A disaster. (Another disaster.) All the same, it was funny when they all rushed out weeping and coughing in a cloud of smoke.

Cloud. Smoke. Words full, crammed, jammed with meaning, with

meanings. Life-and-death meanings, signifying life, signifying death. The poets had not been talking virtually, after all.

> I wandered lonely as a cloud…
> What is the weather in a beard?
> It's windy there and rather weird…

The 0-2 strain of oats came up out of the dirt, sprang up (*spring*), shot up, put out leaves and beautiful hanging grain-heads, was green, was yellow, was harvested. The seeds flowed between your fingers like polished beads, fell (*fall*) back into the heap of precious food.

Abruptly, the material received from the ship ceased to contain any personal messages or information, consisting of rebroadcasts of the three recorded talks given by Kim Terry, talks by Patel Inbliss, sermons by various archangels, and a recording of a male choir chanting, played over and over.

"Why am I Six Lo Meiling?"

When the child understood her mother's explanation, she said, "But that was ontheship. We live here. Aren't we all Zeroes?"

5-Lo Ana told this story in Meeting, and it went through the whole community causing pleasure, like the flight of one of the creatures with fluttering transparent wings edged with threads of gold, at which everybody looked up and stopped work and said, "Look!" Mariposas, somebody called them, and the pretty name stuck.

There had been a good deal of talk, during the cold weather when work wasn't so continuous, about the names of things. About naming things. Such as the dogs. People agreed that naming should be done seriously. But it was no good looking in the records and finding that on Dichew there had been creatures that looked something like this brown creature here so we'll call it *beetle*. It wasn't beetle. It ought to have its own name. Tree-crawler, clickclicker, leaf-chewer. And what about us? Ana's kid is right, you know? 4's, 5's, 6's—what's that got to do with us now, here? The angels can go on to 100…Lucky if they get to 10…What about Zerin's baby? She isn't 6-Lahiri Padma. She's 1-Shindychew-Lahiri-Padma…Maybe she's just Lahiri Padma. Why do we need to count the steps? We aren't going anywhere. She's here. She lives here. This is Padma's world.

She found Luis in the patty-gardens behind the west compound. It was his day off from the hospital. A beautiful day of early summer. His hair shone in the sunlight. She located him by that silver nimbus.

He was sitting on the ground, on the dirt. On his day off he did a

shift at the irrigation system of little ditches, dikes, and watergates, which required constant but unlaborious supervision and maintenance. Patty grew well only when watered but not overwatered. The tubers, baked whole or milled, had become a staple since Liu Yao's success at breeding the edible strain. People who had trouble digesting native seeds and cereals thrived on patty.

Children of ten or eleven, old people, damaged people, mostly did irrigation shifts; it took no strength, just patience. Luis sat near the watergate that diverted the flow from West Creek into one or the other of the main channel systems. His legs, thin and brown, were stretched out and his crutch lay beside them. He leaned back on his arms, hands flat on the black dirt, face turned to the sun, eyes shut. He wore shorts and a loose, ragged shirt. He was both old and damaged.

Hsing came up beside him and said his name. He grunted but did not move or open his eyes. She squatted down by him. After a while his mouth looked so beautiful to her that she leaned over and kissed it.

He opened his eyes.

"You were asleep."

"I was praying."

"Praying!"

"Worshipping?"

"Worshipping what?"

"The sun?" he said, tentative.

"Don't ask me!"

He looked at her, exactly the Luis look, tenderly inquisitive, noncommittal, unreserved; ever since they were five years old he had been looking at her that way. Looking into her.

"Who else would I ask?" he asked her.

"If it's about praying and worshipping, not me."

She made herself more comfortable, settling her rump on the berm of an irrigation channel, facing Luis. The sun was warm on her shoulders. She wore a hat Luisita had inexpertly woven of grain-straw.

"A tainted vocabulary," he said.

"A suspect ideology," she said.

And the words suddenly gave her pleasure, the big words—*vocabulary! ideology!*—Talk was all short, small, heavy words: food, roof, tool, get, make, save, live. The big words they never used any more, the long, airy words carried her mind up for a moment like a mariposa, fluttering aloft on the wind.

"Well," he said, "I don't know." He pondered. She watched him ponder. "When I smashed my knee, and had to lie around," he said, "I decided there was no use living without delight."

After a silence she said, in a dry tone, “Bliss?”

“No. Bliss is a form of VU. No, I mean delight. I never knew it on the ship. Only here. Now and then. Moments of unconditional existence. Delight.”

Hsing sighed.

“Hard earned,” she said.

“Oh yes.”

They sat in silence for some time. The south wind gusted, ceased, blew softly again. It smelled of wet earth and bean-flowers.

Luis said:

> “‘When I am a grandmother, they say, I may walk under heaven,
> On another world.’”

“Oh,” Hsing said.

Her breath caught in another, deeper sigh, a sob. Luis put his hand over hers.

“Alejo went fishing with the children, upstream,” she said.

He nodded.

“I worry so much,” she said. “I worry the delight away.”

He nodded again. Presently he said, “But I was thinking…when I was worshipping, or whatever, what I was thinking, was about the dirt.” He picked up a palmful of the crumbly, dark floodplain soil, and let it fall from his hand, watching it fall. “I was thinking that if I could, I’d get up and dance on it…Dance for me,” he said, “will you, Hsing?”

She sat a moment, then stood up—it was a hard push up off the low berm, her own knees were not so good these days—and stood still.

“I feel stupid,” she said.

She raised her arms up and outward, like wings, and looked down at her feet on the dirt. She pushed off her sandals, pushed them aside, and was barefoot. She stepped to the left, to the right, forward, back. She danced up to him holding her hands forward, palms down. He took them, and she pulled him up. He laughed; she did not quite smile. Swaying, she lifted her bare feet from the dirt and set them down again while he stood still, holding her hands. They danced together that way.